

# KV-M2530E/M2531E

## RM-816

## SERVICE MANUAL

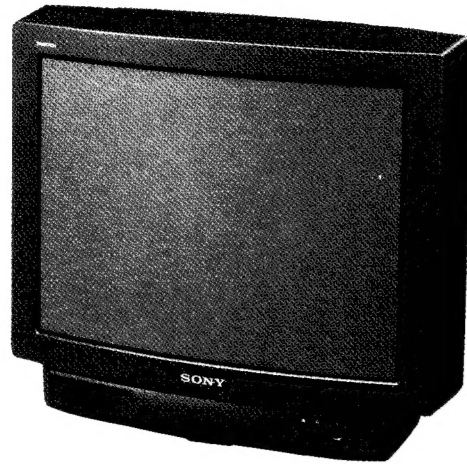
*Spanish Model*

KV-M2530E

Chassis No. SCC-F12H-A

KV-M2531E

Chassis No. SCC-F12G-A



## AE-1C CHASSIS

MODELS OF THE SAME SERIES	
KV-M2530E/M2531E	KV-E2523E/E2923E
KV-M2520E/M2521E	KV-A2913E
KV-A2113E/A2513E	KV-C2123E

### SPECIFICATIONS

Television system	B/G/H	Sound output	10W (Music)
Color system	PAL	Power consumption	83Wh (KV-M2530E)
Channel coverage	VHF: E2-E12 UHF: E21-E69		86Wh (KV-M2531E)
	CABLE TV: S1-S41	Dimensions	Approx. 577 x 523 x 491mm (w/h/d)
	CABLE TV: S01-S05, M1-M10, U1-U10	Weight	Approx. 34kg
Picture tube	Hi-Black Trinitron tube	Supplied accessories	RM-816 Remote Commander (1)
	Approx. 65 cm		IEC designation R6 batteries (2)
	(Approx. 59 cm picture measured diagonally)	[RM-816]	
	110°-degree deflection	Remote control system	infrared control
Inputs	Ⓔ 1 21-pin connector:	Power requirements	3V dc
	CENELEC standard including		2 batteries IEC designation
	RGB input.		R6 (size AA)
	Front: Ⓔ 3	Dimensions	Approx. 75 x 221 x 23mm (w/h/d)
	Ⓔ Video input phono jack	Weight	Approx. 230g (including batteries)
	Ⓔ Audio input phono jack	Accessories supplied	IEC designation R6 Commander
	Ⓔ S Video input 4pin DIN		
	Y: 1Vp-p±3dB 75ohm		
	C: 0.3Vp-p±3dB 75ohm		
Outputs	21-pin connector: CENELEC standard		
	Earphones jack: minijack		

Design and specifications are subject to change without notice.

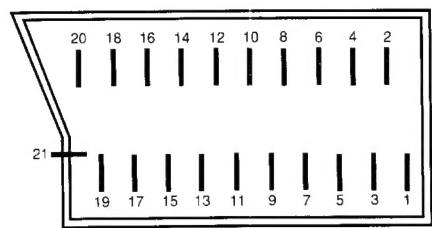


## TRINITRON® COLOR TV

# SONY®



21 - pin Euro Connector Configuration



PIN	SIGNAL	SPECIFICATION
1	Audio output	0.5Vrms/1kilohm or less
2	Audio input	0.5Vrms/10kilohm or more
3	Audio output	0.5Vrms/1kilohm or less
4	Earth ( audio )	
5	Earth ( B - input )	
6	Audio input	0.5Vrms/10kilohms or more
7	B - input	0.7Vp-p/75ohms
8	Function switching	9.5V to 12V
9	Earth ( G - input )	
10		
11	G - input	0.7Vp-p/75ohms
12		
13	Earth ( R - input )	
14	Earth ( blanking )	
15	R - input	0.7Vp-p/75ohms
16	Fast blanking	1V to 3V / 75ohms
17	Earth ( video )	
18	Earth ( fast blanking )	
19	Video output	1Vp-p / 75ohms
20	Video input	1Vp-p / 75ohms
21	Screening plug	

4 pin connector [E]


Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y ( S signal ) input	1V ± 3db 75ohm, positive Sync 0.3V
4	C ( S signal ) input	0.3V ± 3db 75ohm positive



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## SAFETY RELATED COMPONENT WARNING !!

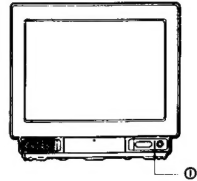
COMPONENTS IDENTIFIED BY SHADING AND MARKED WITH  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



## SECTION 1 GENERAL

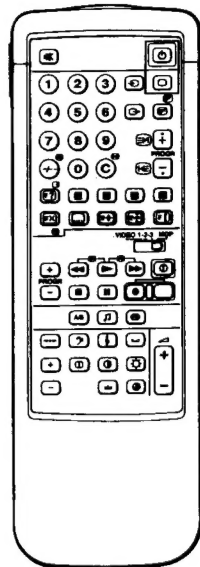
### 1-1. SWITCHING ON/OFF

After you have completed the basic preparation, your TV is ready to be connected to the mains power supply (220/240V AC, 50Hz).



#### How to turn the TV on

Action	Result
Press ① on the TV.	The TV will turn on. <b>Note:</b> If the screen remains blank, the TV may be in the standby mode. Press ② on the commander to switch it on.



#### How to turn the TV off

A Temporarily	
Press ② to enter standby mode.	The TV will be in standby. To return to the TV mode press ③
B Completely	
Press ④ on the TV.	The TV will turn off.

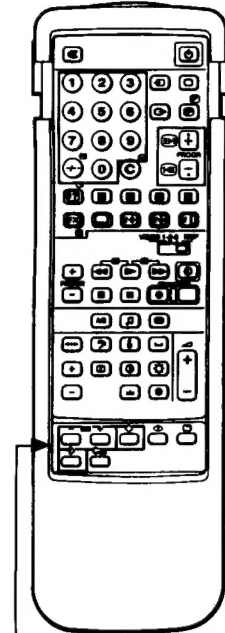
### 1-2. PRESETTING

Before viewing the TV programmes you need to preset TV channels. There are 60 spaces available for storing these channels.

TV stations broadcast their channels at certain frequencies. You must preset these channels to programme numbers on the TV. If you are unfamiliar with the channel numbers of the stations you wish to preset, use "How to Preset Channels Automatically". If you are familiar with the channel numbers refer to "How to Preset TV Channels Directly".

Slide open the full function side of the Remote Commander to reveal preset buttons.

#### How to preset channels automatically

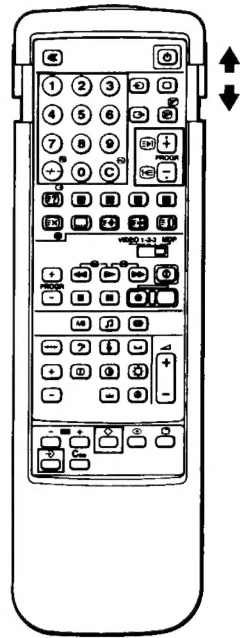


**Note:** These buttons should be used in preset mode only.

Action	Result
<b>1</b> Press → to enter the preset mode. 	The programme number will start flashing.
<b>2</b> Press PROGR +/- or the number buttons to select the programme number to which you want to preset a channel.  <b>Note</b> To select a double-digit number, use the -/-- button. For example, if you want to choose 23, press -/--, 2, and then 3.	The programme number changes
<b>3</b> Press CH+ or - once to search forward or backward for channels. 	When a channel is tuned in, the search will stop and the channel number will be displayed. <b>Note</b> If you want to skip a channel, press CH+ or - again to restart the search.
<b>4</b> Press ◇ if you want to store the channel which is tuned in. Press → to exit preset mode without storing.	The channel is now stored and you have returned to TV mode.
<b>5</b> Repeat steps 1 to 4 to store the other channels.	

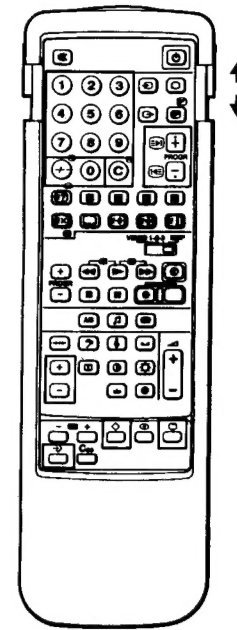


## How to preset TV channels directly



Action	Result
<b>1</b> Press $\rightarrow$ to enter the preset mode. 	The programme number will start flashing.
<b>2</b> Press PROGR +/- or the number buttons to select the programme number on which you want to preset a channel.  <b>Note</b> To select a double-digit number, use the -/-- button. For example, if you want to choose 23, press -/--, 2, and then 3.	The programme number changes.
<b>3</b> Press C. 	The indication "C--" starts flashing on the display.
<b>4</b> Select the channel number with two digits (e.g. 04) by pressing the number buttons.  <b>Note</b> Press the second number within 5 seconds after the first one, otherwise the operation will be cancelled.	The channel number changes to select the new channel.  <b>Note</b> If you have made a mistake the letter "X" will appear. Repeat step 2 again.
<b>5</b> Press $\diamond$ to store the channel which is tuned in. Press $\rightarrow$ to exit the preset mode without storing. 	The channel is now stored and you have returned to TV mode.
<b>6</b> Repeat steps 1 to 5 to store the other channels.	

You can use up to five characters to "name" a channel or station (e.g. BBC1).



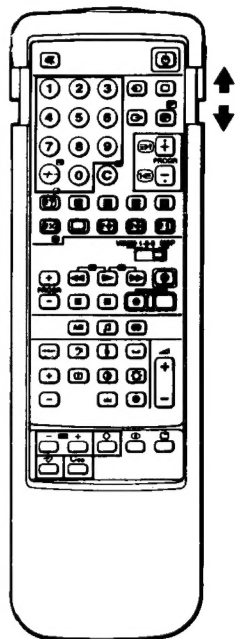
Action	Result
<b>1</b> Select a programme number you want to name by pressing the PROGR +/- or the number buttons 	The selected programme number will appear.
<b>2</b> Press $\rightarrow$ . 	The programme number starts flashing.
<b>3</b> Press C. 	The first column of the station name indication will start flashing.
<b>4</b> Press + or - repeatedly to select a letter in the alphabet, a number, or a blank space. 	The letters of the alphabet, numbers and space (" ") will appear sequentially.
<b>5</b> Press C. 	The first character is now set and the second column will start flashing.
<b>6</b> Repeat steps 4 and 5 to set each letter or number.	
<b>7</b> Press $\diamond$ . 	The channel name is now stored and you have returned to TV mode.

## How to tune in a channel temporarily

You can tune a channel in temporarily, if it has not been preset.

Action	Result
<b>1</b> Press C. For cable channels, press C twice.	The indication "C" appears on the screen.
<b>2</b> Select the channel number with two digits by pressing the number buttons (e.g. for channel 4, first press 0, then 4.)	The channel is received, but it is not stored to any programme number.





Using the PROGR +/- buttons you can skip unused programme channel numbers. However, the skipped numbers may still be called up using the number buttons.

Action	Result
<b>1</b> Press → to enter the preset mode.	The programme number will start flashing.
<b>2</b> Select the programme number that you want to skip by pressing PROGR +/- or the number buttons.	The programme number changes.
<b>3</b> Press Coo.	The lowest channel number appears under the programme number.
<b>4</b> Press ◊.	The channel is now stored and you have returned to TV mode.
<b>5</b> Repeat steps 1 to 4 to skip other programme numbers.	

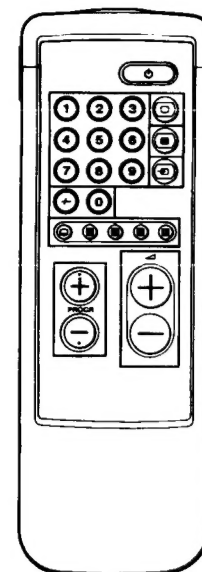
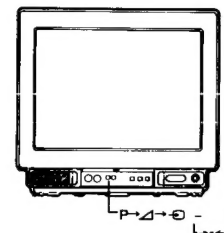
#### How to Fine Tune Manually

If the picture is distorted, you can fine tune the channel manually.

Action	Result
Press [ ] +/- repeatedly until the picture looks normal.	The indication ← F → appears on the screen.
Press → to enter the preset mode.	The programme number starts flashing.
Press ◊.	The fine tuning is stored.

### 1-3. BASIC TV OPERATION

**Note:** Press ⊥ on door to open.



This section introduces you to the basic control functions which are available on the simple side of the remote commander.

#### How to Select Programmes

Before you can select programmes make sure that you have preset channels, (refer to pages 5 and 6).

Action	Result
Press PROGR +/- or the number buttons. To select a double-digit number, use the -/-- button. For example, if you want to choose 23, press -/--, 2, and then 3.	The selected programme is displayed.

#### How to Adjust the Volume

Action	Result
Press ∆ +/-.	The volume markers will appear and are adjusted accordingly.

#### How to Use Additional Functions

##### How to operate with the buttons on the TV

You can also select programmes and adjust the volume using the P→∆→◊ and →← +/- buttons on the front of the TV.  
For operation, first press the P→∆→◊ button repeatedly so that the P (for programme) or ∆ (for volume) indication appears on the screen, and then adjust with the →← +/- buttons.

**Note:** To restore factory set level press →← +/- together.

##### Basic teletext operation

Select:  
The [ ] button to view teletext.  
The [ ] button to request subtitles (p.888).  
The [ ] button to return to TV mode.  
For details about teletext operation, refer to page 12.

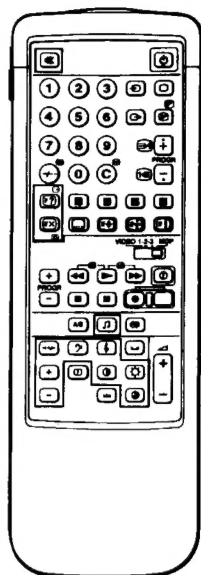
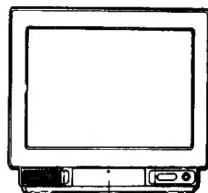
##### How to view the video input picture

Press [ ]. To return to the TV mode, press [ ]. For further details, refer to page 15.



## 1-4. ADVANCED TV OPERATION

This section shows you how to use convenient features, to adjust the picture and sound to your taste, enter a name for a channel to be displayed on the screen, and fine tune a channel.  
Use the full-function side of the Remote Commander.



### How to use on-screen display and special sound features

You can enjoy the following convenient features.

How to	Action	To resume normal picture/sound
Display on-screen indications	Press <b>⏏</b>	Indications disappear after 5 seconds.
Display programme number	Press <b>⏏</b> twice.	Press <b>⏏</b> twice again
Mute the sound	Press <b>🔇</b>	Press <b>🔇</b> again.
Set the sound to music listening position	Press <b>🎵</b>	Press <b>🎵</b> again.
Request the time	Press <b>🕒</b>	Press <b>🕒</b> again.

### How to adjust the picture and sound

Although the picture and sound have been adjusted at the factory, you might want to adjust them to your own taste. To do this, please follow the steps.

To Adjust:	Press:	Then:	Result: (- ↔ +)
<b>Picture:</b>			
Colour Intensity	<b>🌈</b>	<b>+</b>	Less ↔ More
Picture Contrast	<b>🔆</b>	<b>-</b>	Less ↔ More
Brightness	<b>☀</b>		Dark ↔ Bright
<b>Sound:</b>			
Base	<b>🔊</b>	<b>+</b>	Less ↔ More
Treble	<b>🔊</b>	<b>-</b>	Less ↔ More

To reset the picture and sound to factory set levels press **↔**.

#### On the set:

Press **→** **←** **+/-** buttons simultaneously.


#### Note:

Some of the functions on the remote commander are not available for use with this TV set.

## 1-5. TELETEXT OPERATION

TV stations broadcast teletext programmes via the TV channels. To use the full teletext features, use the buttons indicated in green on the full function side of the Remote Commander.


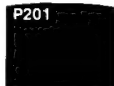
### How to View the Teletext

Action	Result
<b>1</b> Select the channel which carries the teletext service you wish to see.	The channel changes on the screen.
<b>2</b> Press <b>⏏</b> .	 If the teletext signal is not broadcast, then <b>p100</b> is displayed.
<b>3</b> Input three digits for the page number using the number buttons. <b>Note</b> If you make a mistake, type in any three digits, then re-enter the correct page number.	The numbers are entered on the screen. The requested page will appear in a few seconds.
<b>To return to the TV mode.</b> Press <b>⏏</b> .  <b>To change the teletext channels</b> First press <b>⏏</b> to return to the TV mode, then repeat steps 1 to 3.	
















#### Note

If the signal of the TV channel is weak, teletext errors may often occur.

### How to Use the Advanced Features of Teletext

How to	Action	Result (On-screen display)
Request the index page.	Press <b>⏏</b> (INDEX).	 The index page appears.
Request the subtitle page (p888).	Press <b>⏏</b> .	The subtitle page is displayed (p888).
Access the next or preceding page.	Press <b>⏏</b> (PAGE +) or <b>⏏</b> (PAGE -).	 The next or preceding page appears.



How to	Action	Result
Superimpose the teletext display on the TV programme.	Press  once if you are in text mode, or press  twice if in TV mode. To return to the normal teletext display press  again.	 The teletext displays are superimposed on the TV programmes.
Prevent a teletext page from being updated or changed.	Press  (HOLD). To resume normal teletext reception, press  .	 The HOLD symbol (  ) appears on the screen and the chosen sub-page is held until you cancel.
Enlarge the teletext display.	Press  once to enlarge the upper half. Press twice to enlarge the lower half. Press again to restore the normal display.	 The upper half is enlarged.
Reveal concealed information (e.g. answers to a quiz).	Press  (REVEAL). Press again to conceal the information.	 The information is revealed.
Watch the TV programme while waiting for a requested page to be displayed.	1. Request a new page.	The numbers are entered.
	2. Press  (TEXT CL).	The TV program is displayed, and the requested page number and other teletext data appear at the top of the screen.
	3. When the requested page has been captured, the page number remains and the other data disappears.	
	4. Press  to view this page.	The requested page is displayed.





Some of the features may not be available depending on the Teletext service.

## 1-6. OPERATION CONNECTIONS/OPERATIONS

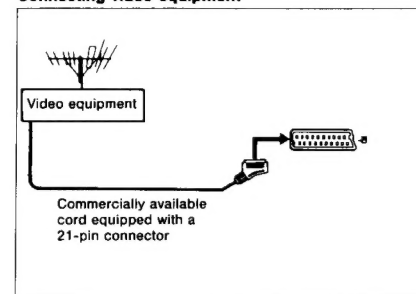
You can connect video equipment such as VTRs and video disc players to the TV.

### How to connect video equipment to the TV

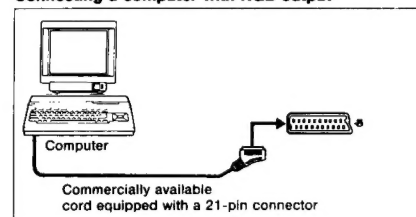
This TV has 2 different input connectors and 1 output signal.

Connector	Acceptable input signal	Available output signal
1 	Normal audio/video and RGB signal	Audio/video from TV tuner
   on the front	Normal audio/video and S video signal	No outputs

#### Connecting video equipment

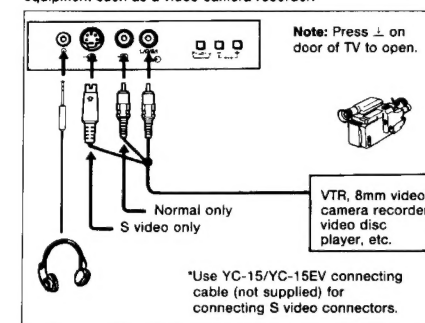


#### Connecting a computer with RGB output



#### Connecting video equipment temporarily

It is convenient to use the front connectors when connecting equipment such as a video camera recorder.



#### To connect a VTR using the $\pi$ terminal

Connect the aerial output of the VTR to the aerial terminal  $\pi$  of the TV.

#### Note

If you connect your VTR to the aerial terminal of the TV, it is recommended that programme number 0 is used to tune in the video signal.

#### S video input (Y/C input)

Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality (especially luminance). This TV is equipped with S video input through which these separated signals can be input directly.

#### If the picture or the sound is distorted





Move the VTR away from the TV.












## How to view the video input picture





You can view the picture of video equipment connected to the input terminals by selecting the input mode.

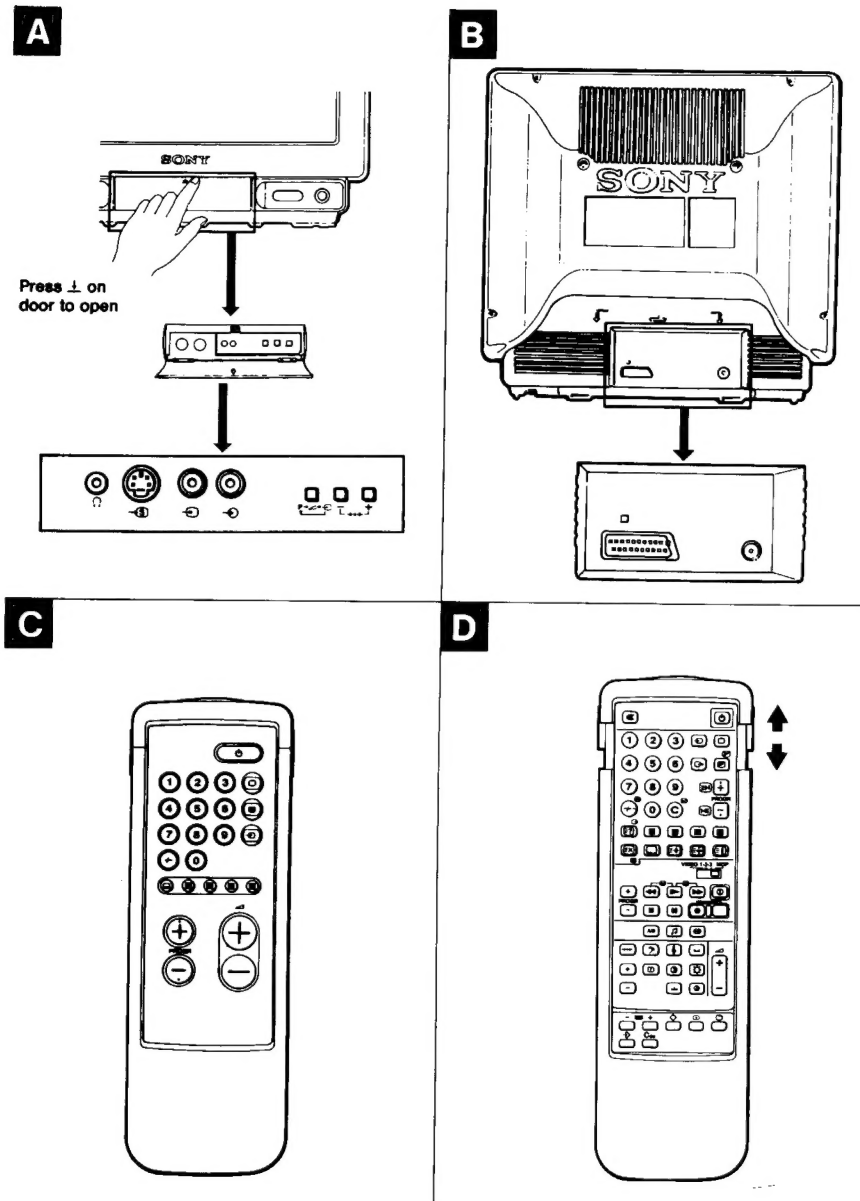
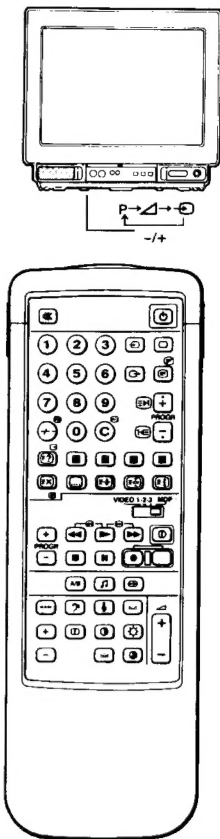
### Operation

Action	Result
Press  repeatedly to select the desired input.	  1 Symbol for the selected input appears. (See the table below.)
To return to the TV mode, press the  button.	

### Input modes

Symbol	Result
	Audio/video input through the  connector.
	RGB input through the  connector.
	Audio/video input through  and  jacks on the front.
	S video input through the  connectors on the front (4-pin connector).

You can also select the input mode using the    button on the TV. In this case, first select  and then press +/- buttons to select the input.





This section briefly describes the buttons and controls on the TV set and on the Remote Commander.  
For more information, refer to the pages given next to each description.

A TV set – Front		
Sign	Name	
	Main power switch	
	Standby indicator	
	Headphones jack (stereo minijack)	
	Input jacks (S-video/video/audio)	
	Function selector (Programme/volume/input)	
	Adjustment buttons for function selector	

B TV set – Rear		
Sign	Name	
	21-pin Euro-AV connector (RGB/video input, TV output)	
	Aerial terminal (IEC type)	

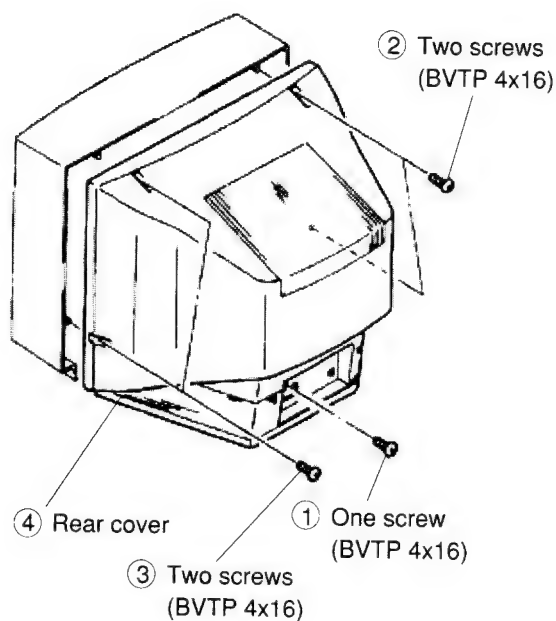
C Remote Commander – simple side		
Sign	Name	
	Input mode selector	
	Teletext button	
	Fastext buttons	
	TV mode selector	
	Standby button	
1,2,3,4,5, 6,7,8,9, and 0	Number buttons	
-/--	Double-digit entering button	
	Volume control button	
PROG +/-	Programme selector	

D Remote Commander – full function side		
Sign	Name	
	Mute on/off button	
	Standby button	
1,2,3,4,5, 6,7,8,9, and 0	Number buttons	
	Input mode selector	
	TV power on/TV mode selector button	
	Teletext button	
	Music button	
-/--	Double-digit entering button	
C	Direct channel entering button	
	Request time display	
	Teletext operation buttons	
	Fastext buttons	
	On-screen display button	
	Picture and sound adjustment reset button	
	Volume control	
PROG +/-	Programme selector	
	Picture and sound controls	
VIDEO 1/2/3, MDP	Video equipment selector	
	Video equipment operation buttons	
Coo	Programme number clear button	
	Channel preset button	
-  +	Tuning buttons	
	Channel store button	
	Station label button	

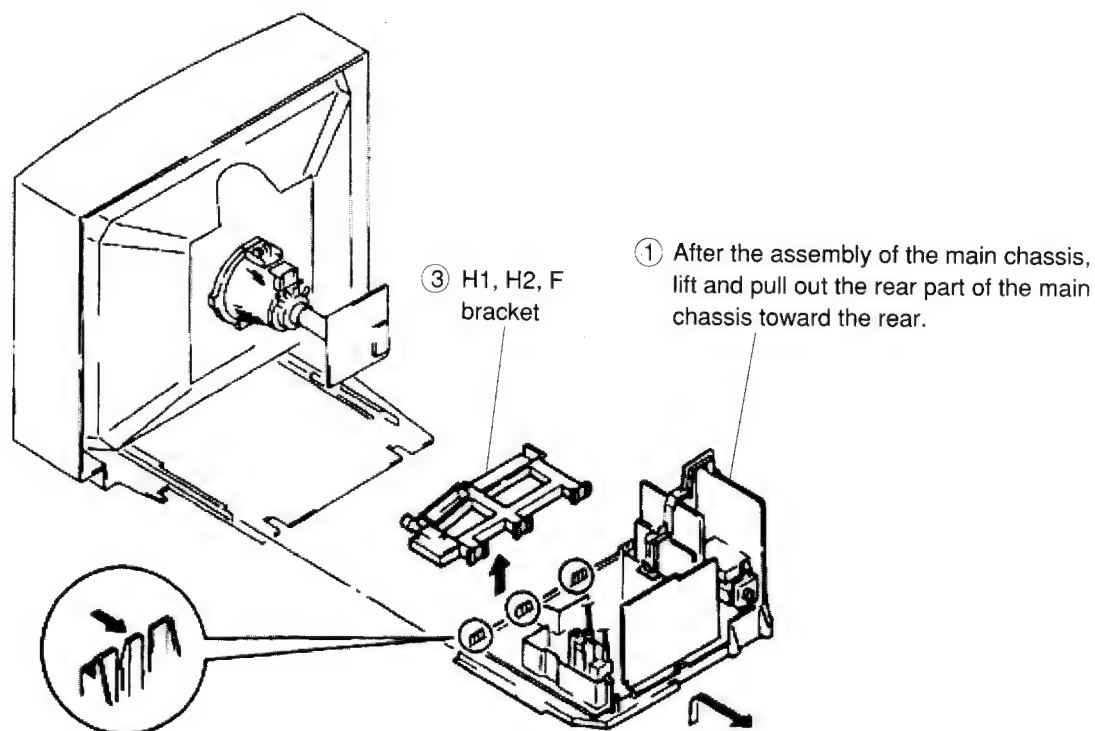


## SECTION 2 DISASSEMBLY

### 2-1. REAR COVER REMOVAL



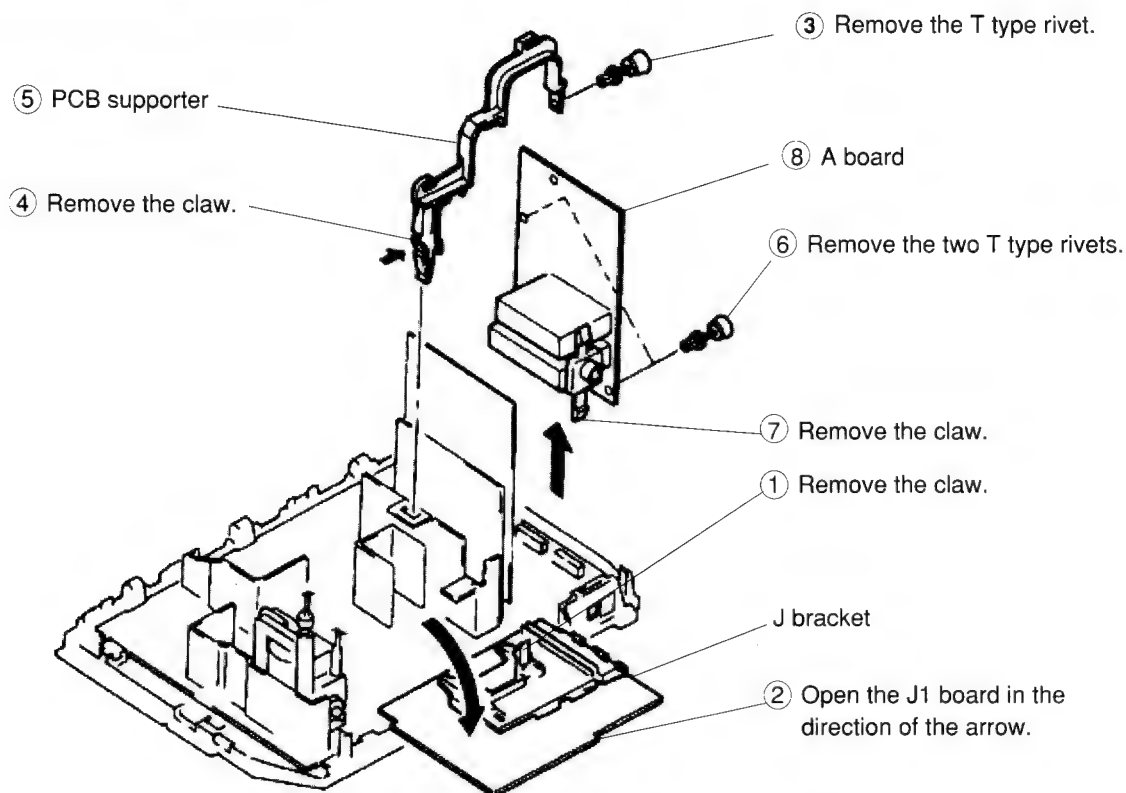
### 2-2. CHASSIS ASSEMBLY REMOVAL



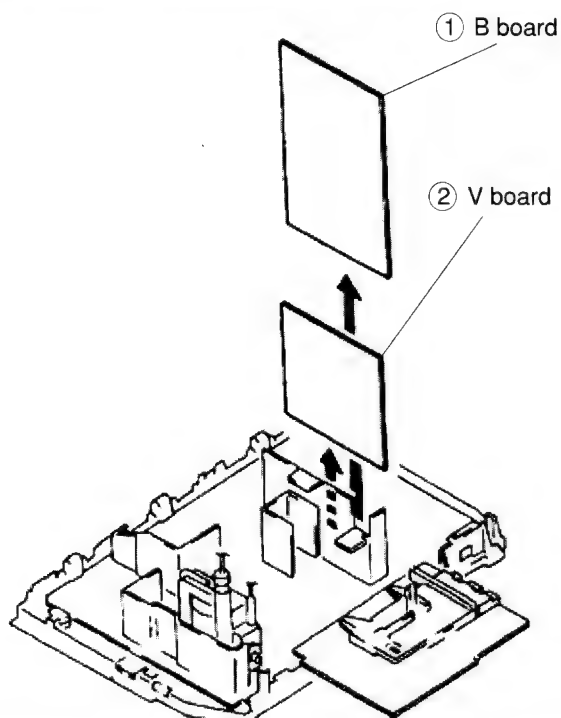
- ② Push the three claws of the main chassis in the direction of the arrow and remove the H1, H2, F bracket upwards.



## 2-3. A AND J1 BOARDS REMOVAL

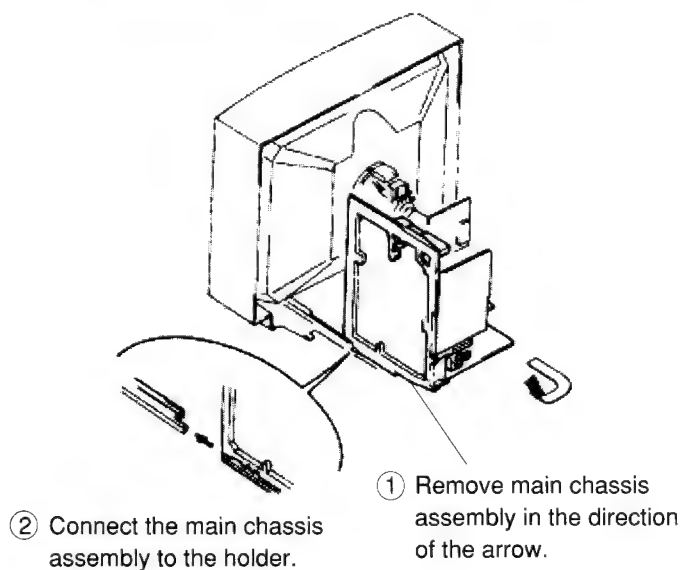


## 2-4. B AND V BOARDS REMOVAL



## 2-5. SERVICE POSITION

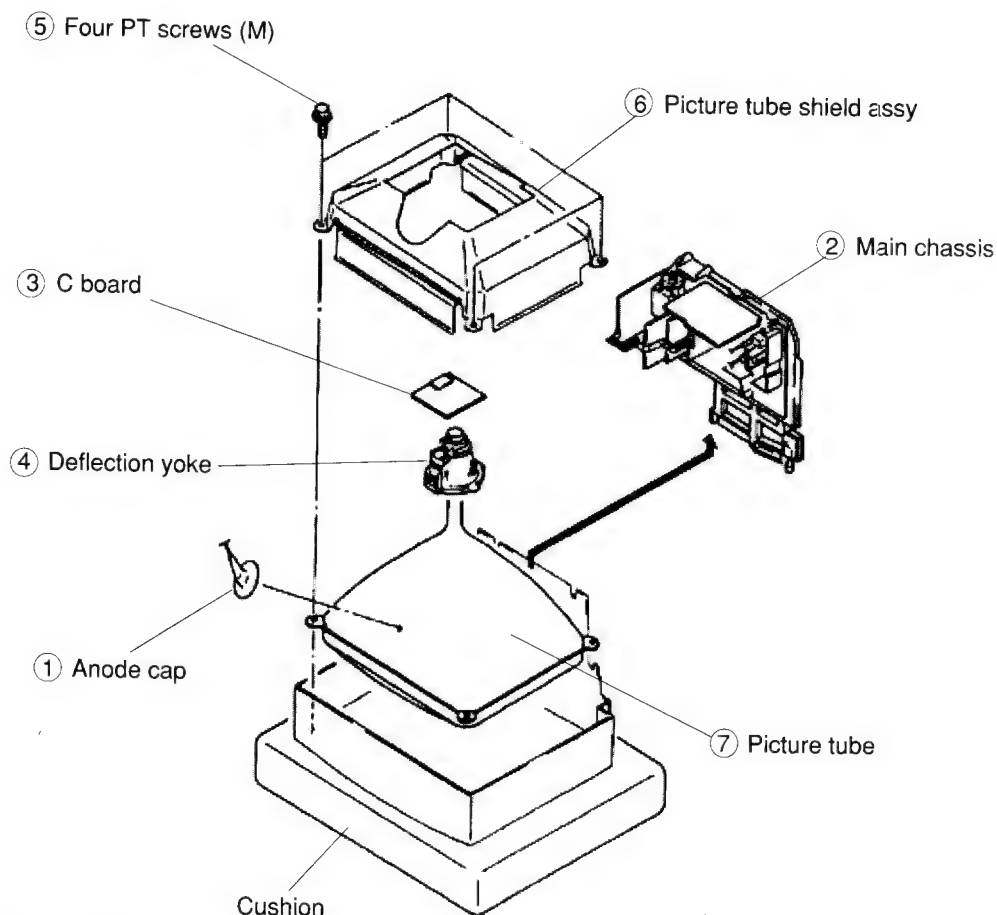
\* Remove the H1, H2, F bracket from the main chassis assembly and then perform the following servicing.  
(Refer to 2-2. CHASSIS ASSEMBLY REMOVAL.)



Note: 10 pin extension cable (S-0945-001-0)



## 2-6. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

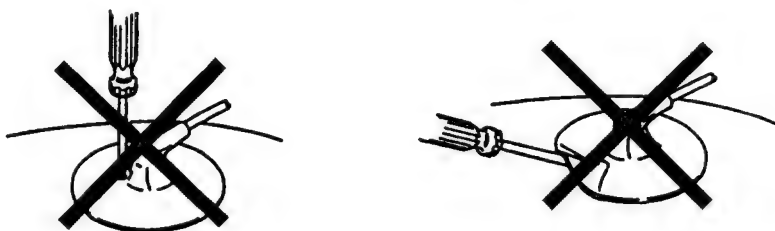
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

#### • REMOVING PROCEDURES

- 
- ① Turn up one side of the rubber cap in the direction indicated by the arrow ①.
  - ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.
  - ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

#### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material !
- ② Don't press the rubber hardy not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardy !  
The shatter-hook terminal will stick out or hurt the rubber.





## SECTION 3

### SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :

● Contrast .....80%

(or remote control normal)

✱ Brightness .....50%

- Carry out the following adjustments in this order:

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required

1. Colour bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

#### Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

#### 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.  
 Contrast } normal  
 Brightness }
2. Position neck ass'y as shown in Fig. 3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.  
 (see Fig. 3-1 through 3-3.)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Fig. 3-1.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.  
 (See Fig. 3-4.)

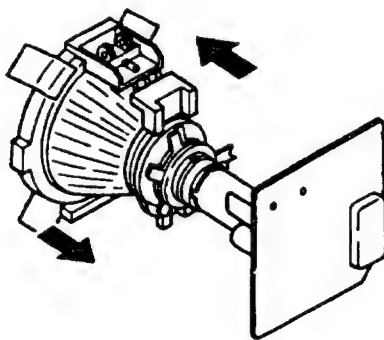


Fig. 3-1

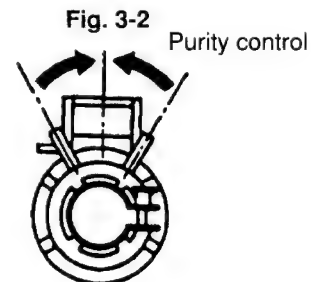


Fig. 3-3

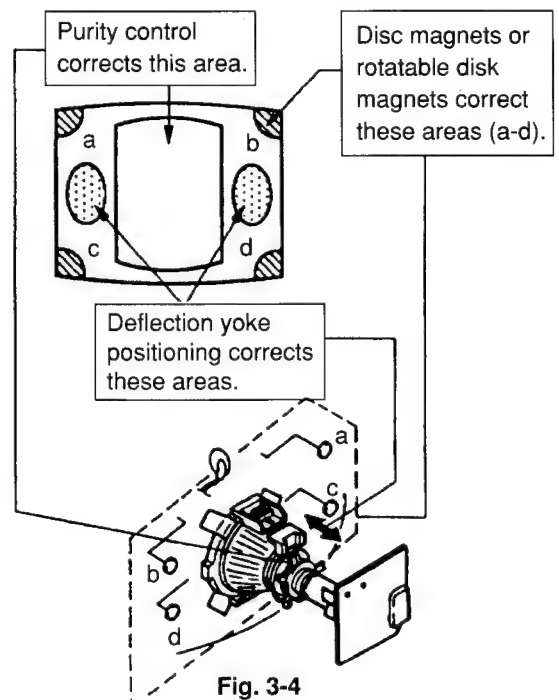
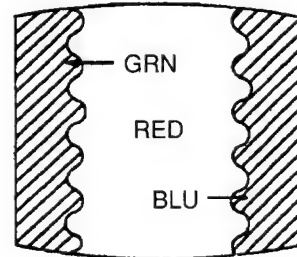


Fig. 3-4

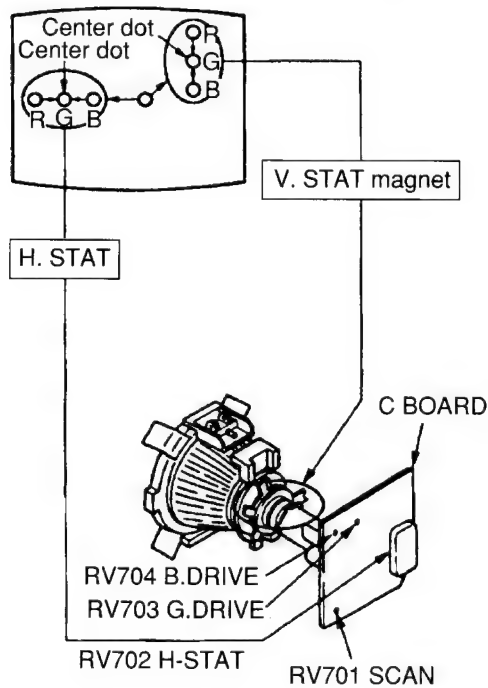


## 3-2. CONVERGENCE

### Preparation :

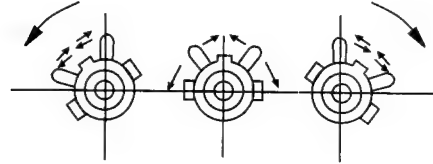
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

### (1) Horizontal and vertical static convergence



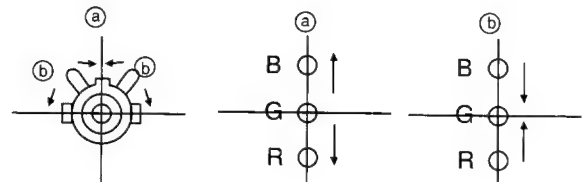
1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other.)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

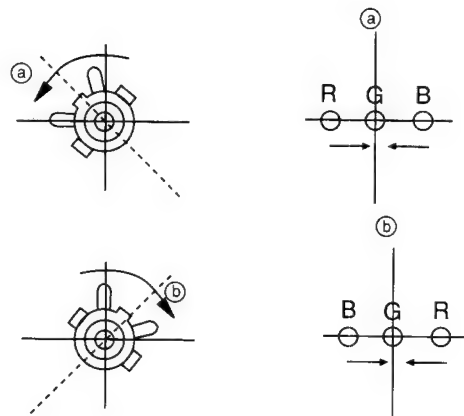


4. If the V.STAT magnet is moved in the direction of the ① and ② arrows, the red, green, and blue points move as shown below.

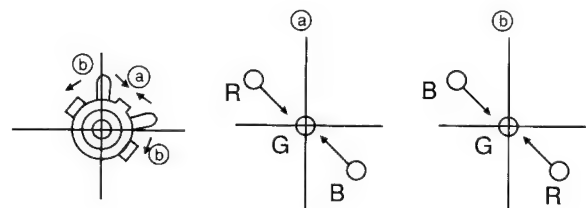
①



②

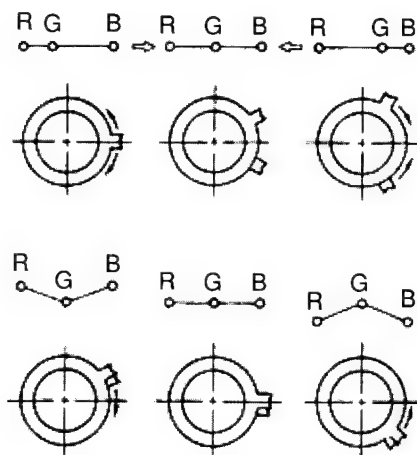


③

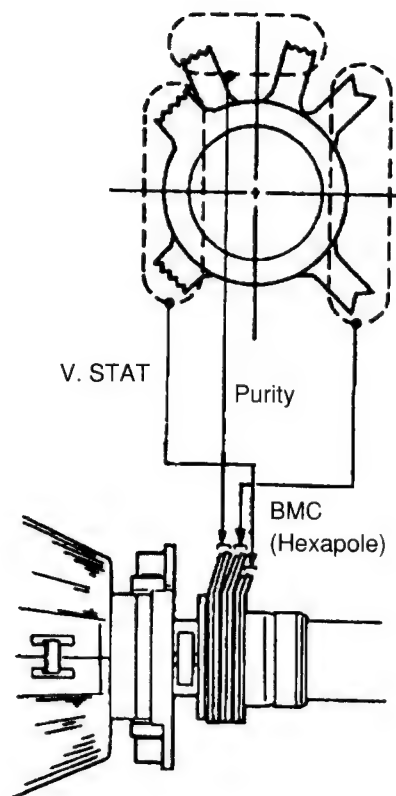




• Operation of BMC (Hexapole) Magnet



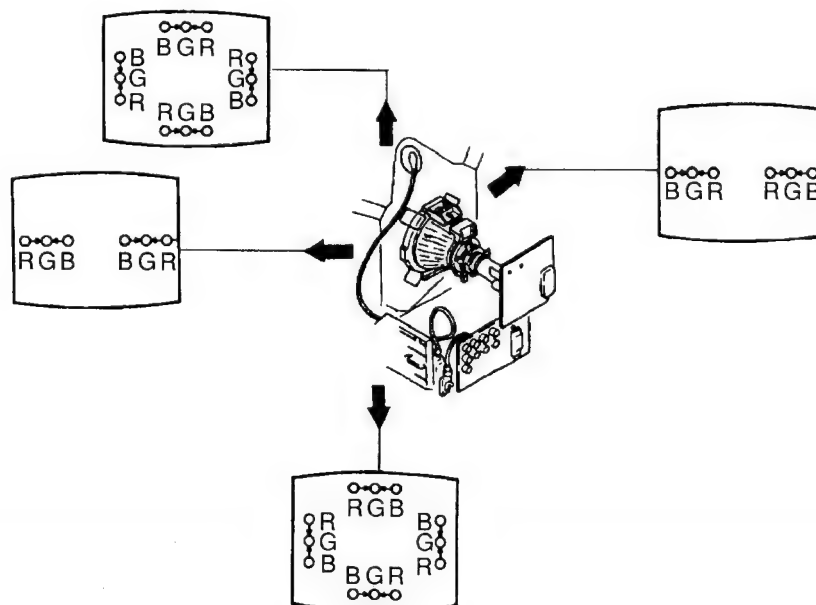
- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking. Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



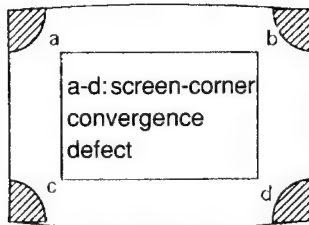
**(2) Dynamic convergence adjustment**

**Preparations:**

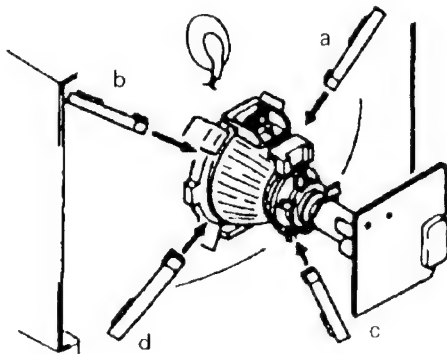
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.





**(3) Screen corner convergence**

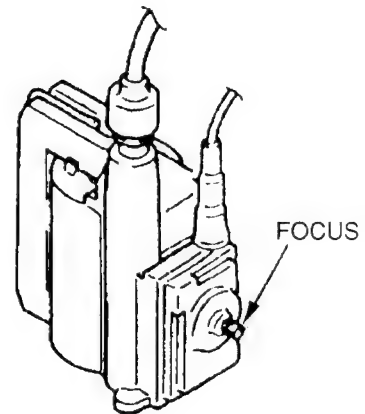
Install the permalloy assembly for the section with faulty.



Permalloy ass'y, correction.

**3-3. FOCUS**

Adjust the focus to optimize the screen.

**3-4. WHITE BALANCE****SCREEN G2 SETTING**

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 170V DC to the R, G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

**WHITE BALANCE ADJUSTMENT**

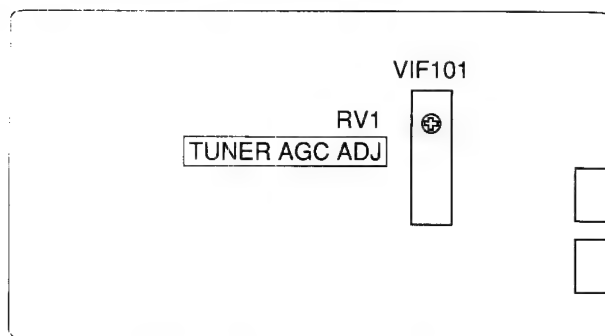
1. Input an all-white signal from the pattern generator.
2. Set the picture brightness and color controls to their normal levels.
3. Use RV704 (B Drive) and RV703 (G Drive) to adjust white balance.

In the adjustments below, have the picture color and brightness settings at their normal levels unless there is a specific instruction to the contrary.



## SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. A BOARD ADJUSTMENT

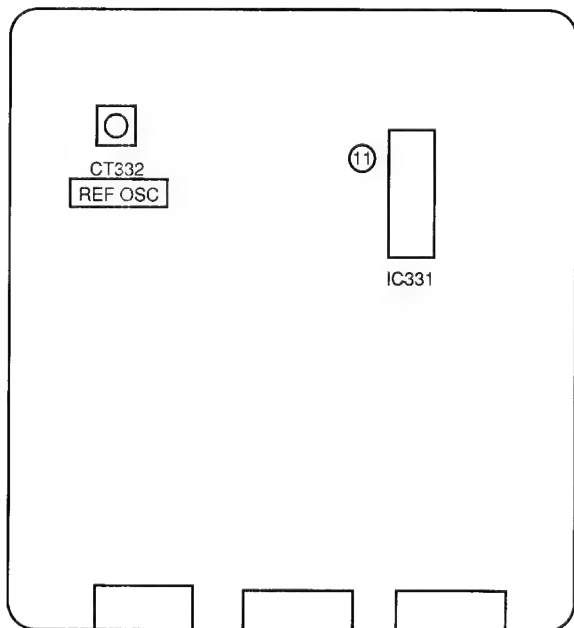


A BOARD (COMPONENT SIDE)

#### TUNER AGC ADJUSTMENT (VIF101, RV1)

1. Align with an appropriate signal between stations.
2. Adjust RV1 so that snow noise and cross modulation just disappear from the picture.

### 4-2. B BOARD ADJUSTMENTS

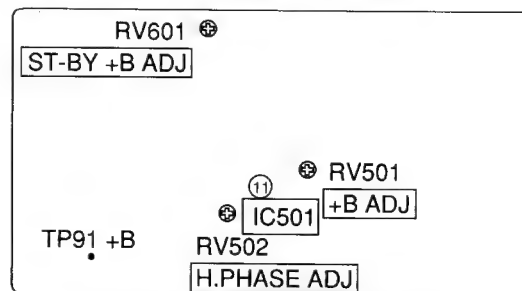


B BOARD (COMPONENT SIDE)

#### REFERENCE OSCILLATOR ADJUSTMENT (CT332 8.8MHz)

1. Input a PAL colour bar signal.
2. Ground pin (11) of the IC331.
3. Adjust CT332 to obtain synchronization.

### 4-3. D BOARD ADJUSTMENTS



D BOARD (COMPONENT SIDE)

#### +B ADJUSTMENT (RV501)

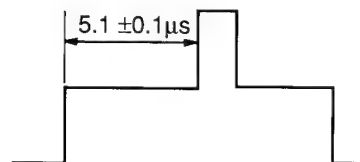
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain  $135 \pm 0.2V$ .

#### ST-BY +B ADJUSTMENT (RV601)

1. Put the system into  $\psi$  standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain  $135 \pm 3V$ .
4. Take the system out of  $\psi$  standby mode (remote commander).

#### H.PHASE ADJUSTMENT (RV502)

1. Input a PAL colour bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H.CENT) to its mechanical center.
4. Connect the oscilloscope to pin (11) (SCP) of IC501.
5. Rotate RV502 to adjust to  $5.1 \pm 0.1\mu s$ .





## 4-4. J1 BOARD ADJUSTMENTS

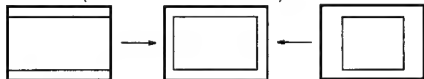
RV1506	RV1504	RV1501 PIN COR
RV1508		RV1502 PIN PHASE
RV1502	RV1505	RV1503 PIN AMP
RV1503	RV1501	RV1504 H.SIZE
RV1509		RV1505 CORNER COR
RV1507		RV1506 V.CENT
		RV1507 V.SIZE
		RV1508 H.CENT
		RV1509 V.ANGLE

J1 BOARD (COMPONENT SIDE)

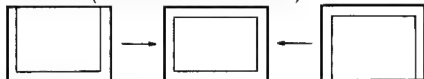
RV1508  
H.CENT (HORIZONTAL CENTER)



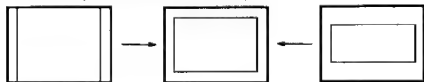
RV1504  
H.SIZE (HORIZONTAL SIZE)



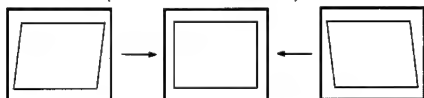
RV1506  
V.CENT (VERTICAL CENTER)



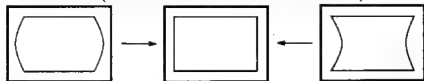
RV1507  
V.SIZE (VERTICAL SIZE)



RV1509  
V.ANGLE (VERTICAL ANGLE)



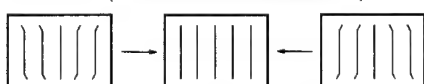
RV1503  
PIN AMP (PINCUSHION AMPLIFIER)



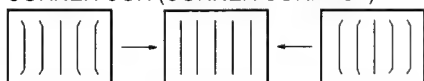
RV1502  
PIN PHASE (PINCUSHION PHASE)



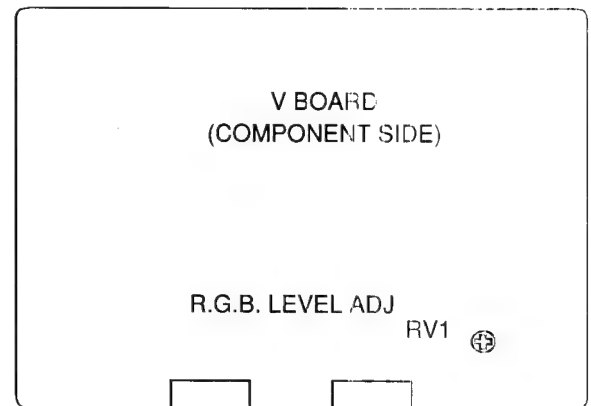
RV1501  
PIN. COR (PINCUSHION CORRECT)



RV1505  
CORNER COR (CORNER CORRECT)



## 4-5. V BOARD ADJUSTMENT



## RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.



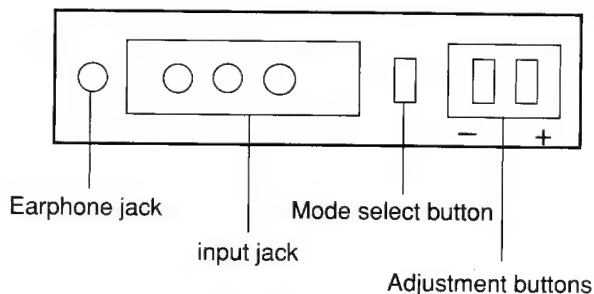
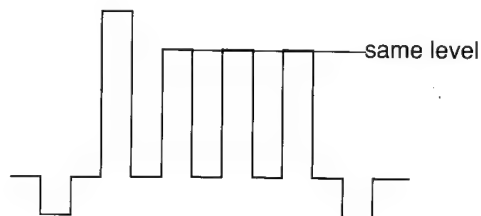
## 4-6. SECONDARY ADJUSTMENTS

### SUB BRIGHTNESS ADJUSTMENT

1. Set the system to receive a test pattern.
  2. Press → • ← on the remote commander to put the system into normal mode.
  3. Switch off the power.
  4. While depressing the adjusting buttons + and – simultaneously, turn on the power. (SUB mode is obtained)
  5. Minimize the ● contrast setting.
  6. Adjust the ☆ brightness control so that the gray scale 0 IRE section is cut off completely and the 20 IRE section is barely glowing.
  7. Depress the ◇ (store) button of the remote commander. (SUB mode is released)
- If there is no test colour pattern
1. Set the system to receive a colour pattern.
  2. Press → • ← on the remote commander to put the system into normal mode.
  - Set the ● colour to its normal state.
  - 3–5. Steps are the same as above.
  6. Since 20 IRE is nearly blue, adjust the e brightness control so that the blue barely glows.
  7. Same as step 7 above.
  8. Press → • ← on the remote commander to put the system into normal mode.

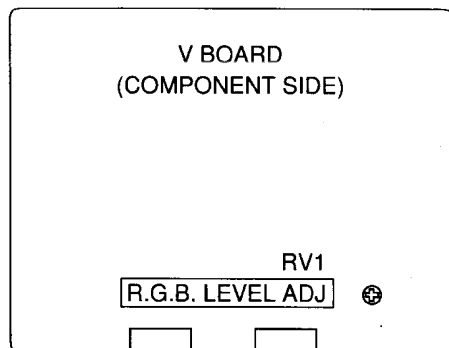
### SUB COLOUR ADJUSTMENT

1. Set the system to receive colour bars.
2. Press → • ← on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and – simultaneously, turn on the power. (SUB mode is obtained).
5. Adjust the colour control so that the B out waveform (pin ⑤ of C board connector CNC72) is as shown in the figure below.
6. Depress the ◇ (store) button of the remote commander. (SUB mode is released)





## 4-5. V BOARD ADJUSTMENT

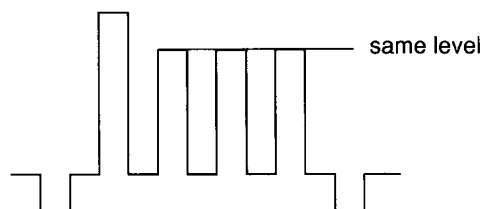


### RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.

### SUB COLOR ADJUSTMENT

1. Set the system to receive color bars.
2. Press → •← on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and – simultaneously, turn on the power. (SUB mode is obtained).
5. Adjust the color control so that the B out waveform (pin ⑤ of C board connector CNC72) is as shown in the figure below.
6. Depress the ◇ (store) button of the remote commander. (SUB mode is released)

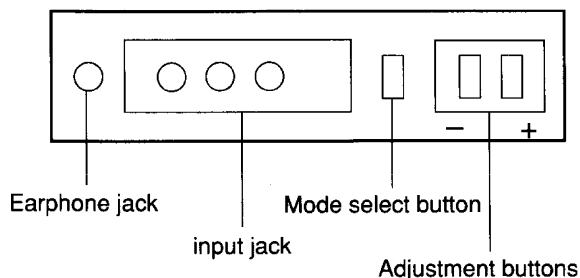


## 4-6. SECONDARY ADJUSTMENTS

### SUB BRIGHTNESS ADJUSTMENT

1. Set the system to receive a test pattern.
2. Press → •← on the remote commander to put the system into normal mode.
3. Switch off the power.
4. While depressing the adjusting buttons + and – simultaneously, turn on the power. (SUB mode is obtained)
5. Minimize the ● contrast setting.
6. Adjust the ✱ brightness control so that the gray scale 0 IRE section is cut off completely and the 20 IRE section is barely glowing.
7. Depress the ◇ (store) button of the remote commander. (SUB mode is released)

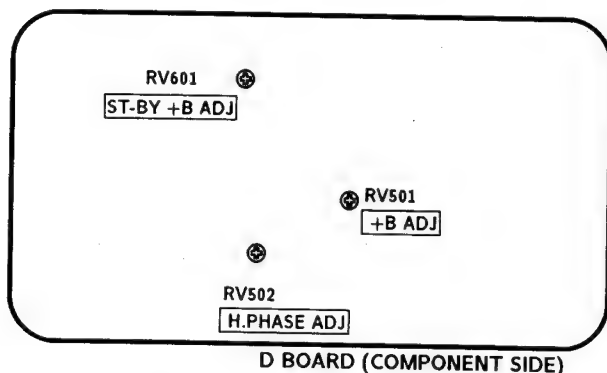
If there is no test color pattern



1. Set the system to receive a color pattern.
2. Press → •← on the remote commander to put the system into normal mode.  
Set the ● color to its normal state.
- 3–5. Steps are the same as above.
6. Since 20 IRE is nearly blue, adjust the ✱ brightness control so that the blue barely glows.
7. Same as step 7 above.
8. Press → •← on the remote commander to put the system into normal mode.



### 4-3. D BOARD ADJUSTMENTS



#### +B ADJUSTMENT (RV501)

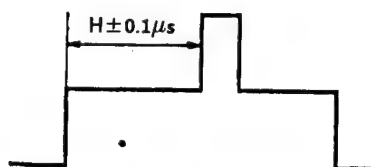
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain  $135 \pm 0.2V$ .

#### ST-BY +B ADJUSTMENT (RV601)

1. Put the system into  $\text{⏻}$  standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain  $135 \pm 3V$ .
4. Take the system out of  $\text{⏻}$  standby mode (remote commander).

#### H.PHASE ADJUSTMENT (RV502)

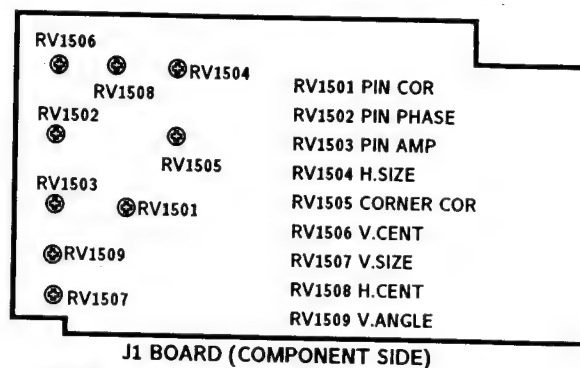
1. Input a PAL color bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H.CENT) to its mechanical center.
4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
5. Rotate RV502 to adjust to  $H \pm 0.1\mu s$ .



Standard of H. PHASE

Model Size	H
25 "	$5.1\mu s$
29 "	$5.5\mu s$

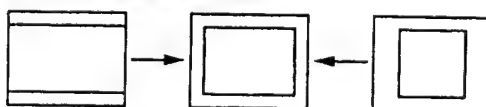
### 4-4. J1 BOARD ADJUSTMENTS



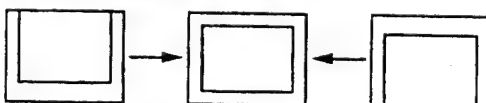
#### RV1508 H. CENT (HORIZONTAL CENTER)



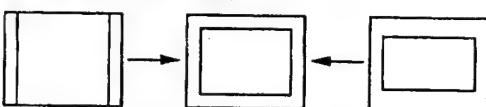
#### RV1504 H. SIZE (HORIZONTAL SIZE)



#### RV1506 V. CENT (VERTICAL CENTER)



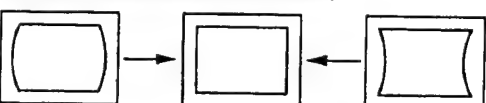
#### RV1507 V. SIZE (VERTICAL SIZE)



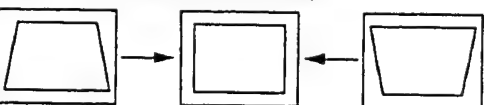
#### RV1509 V. ANGLE (VERTICAL ANGLE)



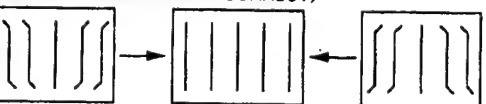
#### RV1503 PIN AMP (PINCUSHION AMPLIFIER)



#### RV1502 PIN PHASE (PINCUSHION PHASE)



#### RV1501 PIN. COR (PINCUSHION CORRECT)

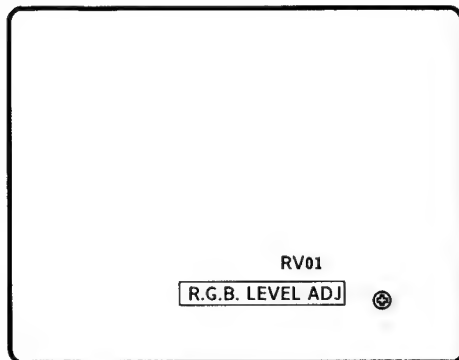


#### RV1505 CORNER COR (CORNER CORRECT)





#### 4-5. V BOARD ADJUSTMENTS



V BOARD (COMPONENT SIDE)

##### **RGB LEVEL ADJUSTMENT (RV01)**

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.

#### 4-6. SECONDARY ADJUSTMENTS

##### **SUB BRIGHTNESS ADJUSTMENT**

1. Set the system to receive a test pattern.
2. Press  $\rightarrow \bullet \leftarrow$  on the remote commander to put the system into normal mode.
3. Switch off the power.
4. While depressing the adjusting buttons + and - simultaneously, turn on the power. (SUB mode is obtained)
5. Minimize the  $\bullet$  contrast setting.
6. Adjust the  $\odot$  brightness control so that the gray scale 0 IRE section is cut off completely and the 20 IRE section is barely glowing.
7. Depress the  $\diamond$  (store) button of the remote commander.  
(SUB mode is released)

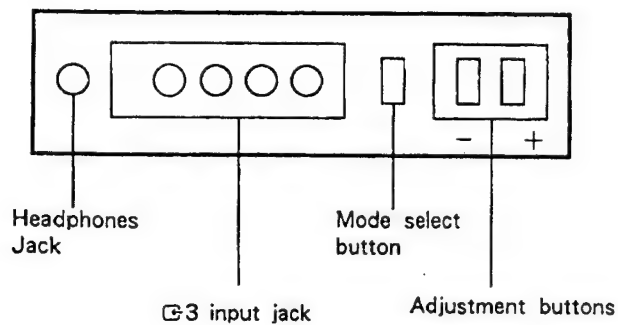
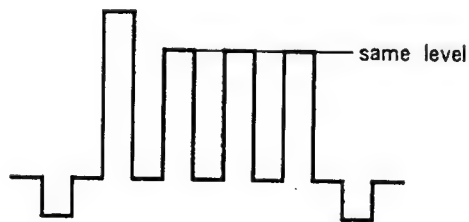
If there is no test color pattern

1. Set the system to receive a color pattern.
2. Press  $\rightarrow \bullet \leftarrow$  on the remote commander to put the system into normal mode.  
Set the  $\odot$  color to its normal state.
- 3-5. Steps are the same as above.
6. Since 20 IRE is nearly blue, adjust the  $\odot$  brightness control so that the blue barely glows.
7. Same as step 7 above.
8. Press  $\rightarrow \bullet \leftarrow$  on the remote commander to put the system into normal mode.



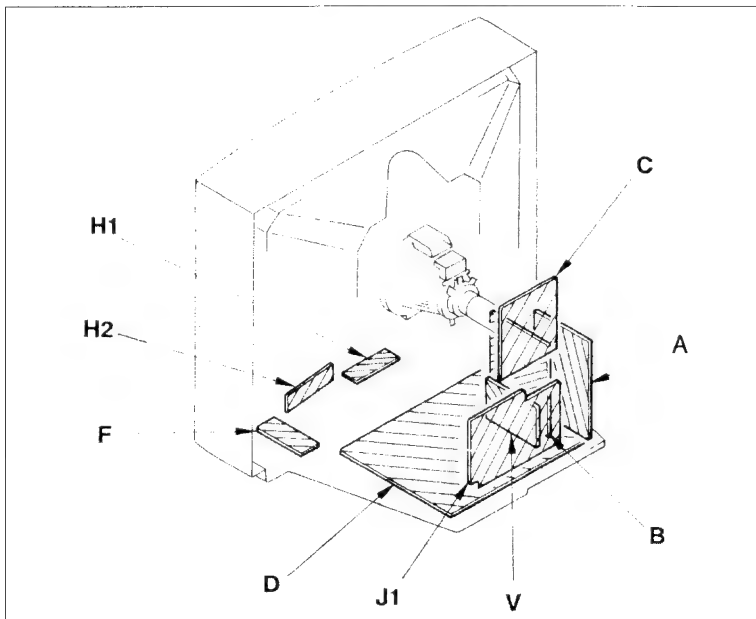
### **SUB COLOR ADJUSTMENT**

1. Set the system to receive color bars.
2. Press → • ← on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and - simultaneously, turn on the power. (SUB mode is obtained).
5. Adjust the color control so that the B out waveform (pin ⑤ of C board connector CNC72) is as shown in the figure below.
6. Depress the ◇ (store) button of the remote commander. (SUB mode is released)





## 5-2. CIRCUIT BOARD LOCATION



## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS - Conductor Side -

### Note :

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $\text{k}\Omega = 1000\Omega$ ,  $\text{M}\Omega = 1000\text{K}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm

Rating electrical power  $\frac{1}{4}$  W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth - ground.
- : earth - chassis.
- : no mounted.

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M $\Omega$  digital multi meter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

### Reference information

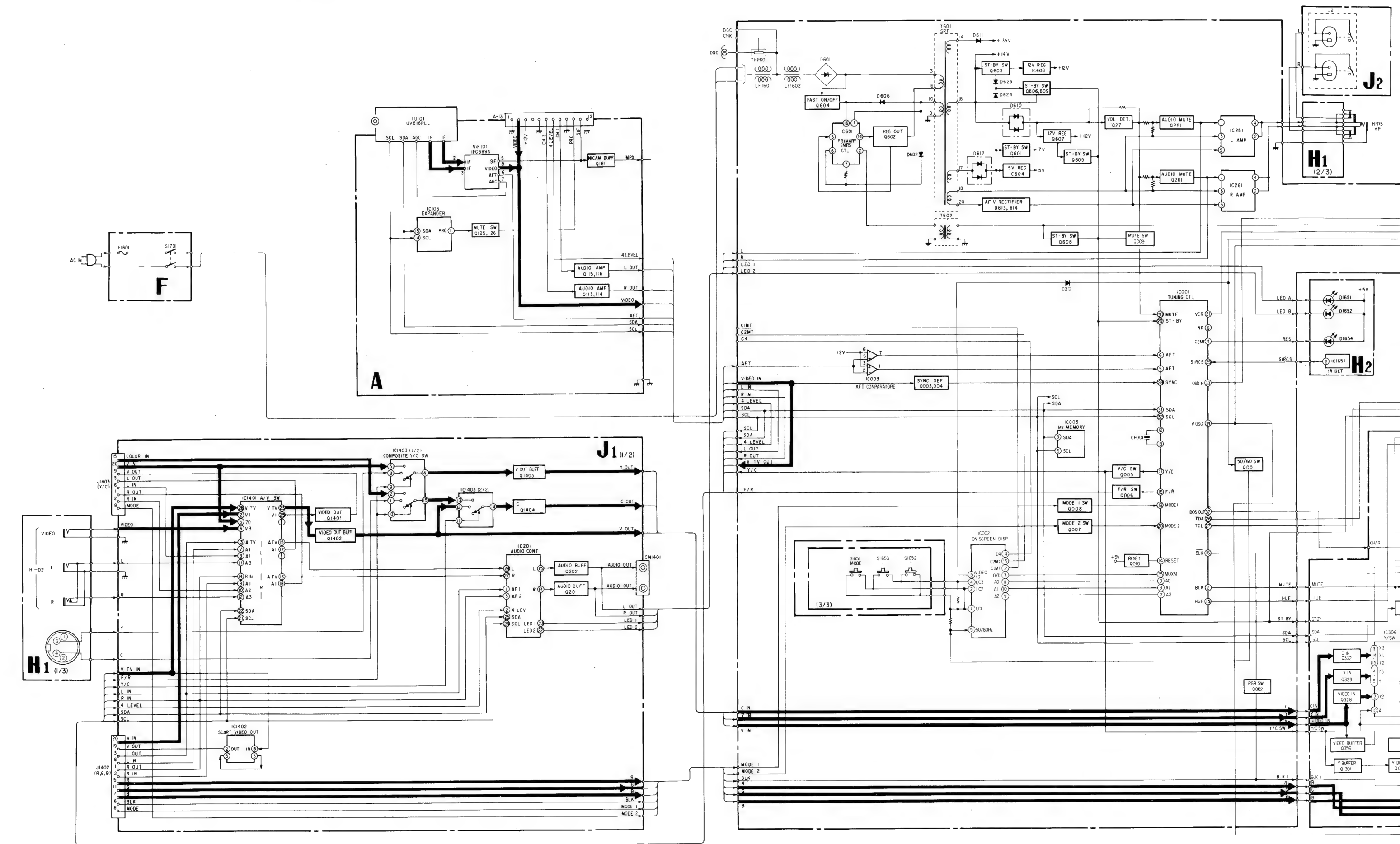
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	:	ADJUSTABLE RESISTOR
	: LF-8L	MICRO INDUCTOR
	: TA	TANTALUM
COIL CAPACITOR	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

**Note :** The components identified by shading and marked are critical for safety. Replace only with part number specified.



SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAM (1)

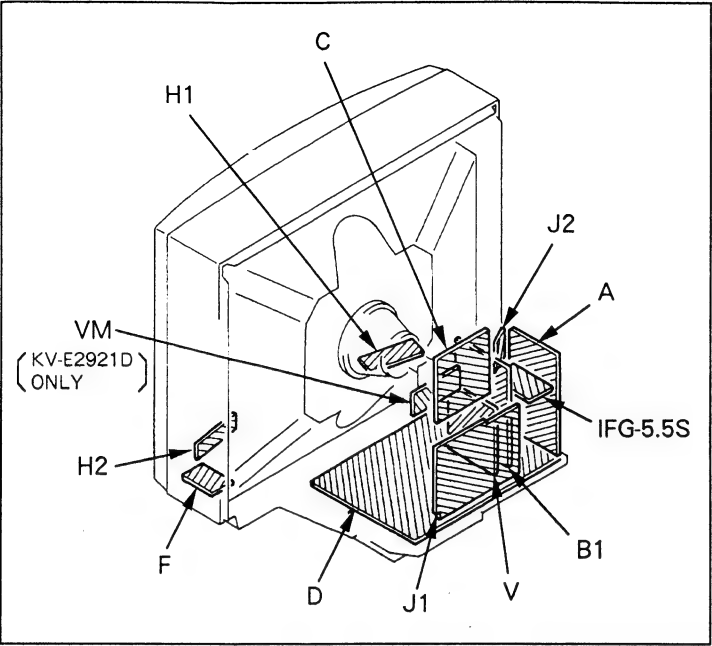









5-2. CIRCUIT BOARDS LOCATION








5-3. SCHEMATIC DIAGRAM AND PRINTED WIRING BOARDS

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note :

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  
pF:  $\mu\text{pF}$  50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm  
Rating electrical power : 1/4W

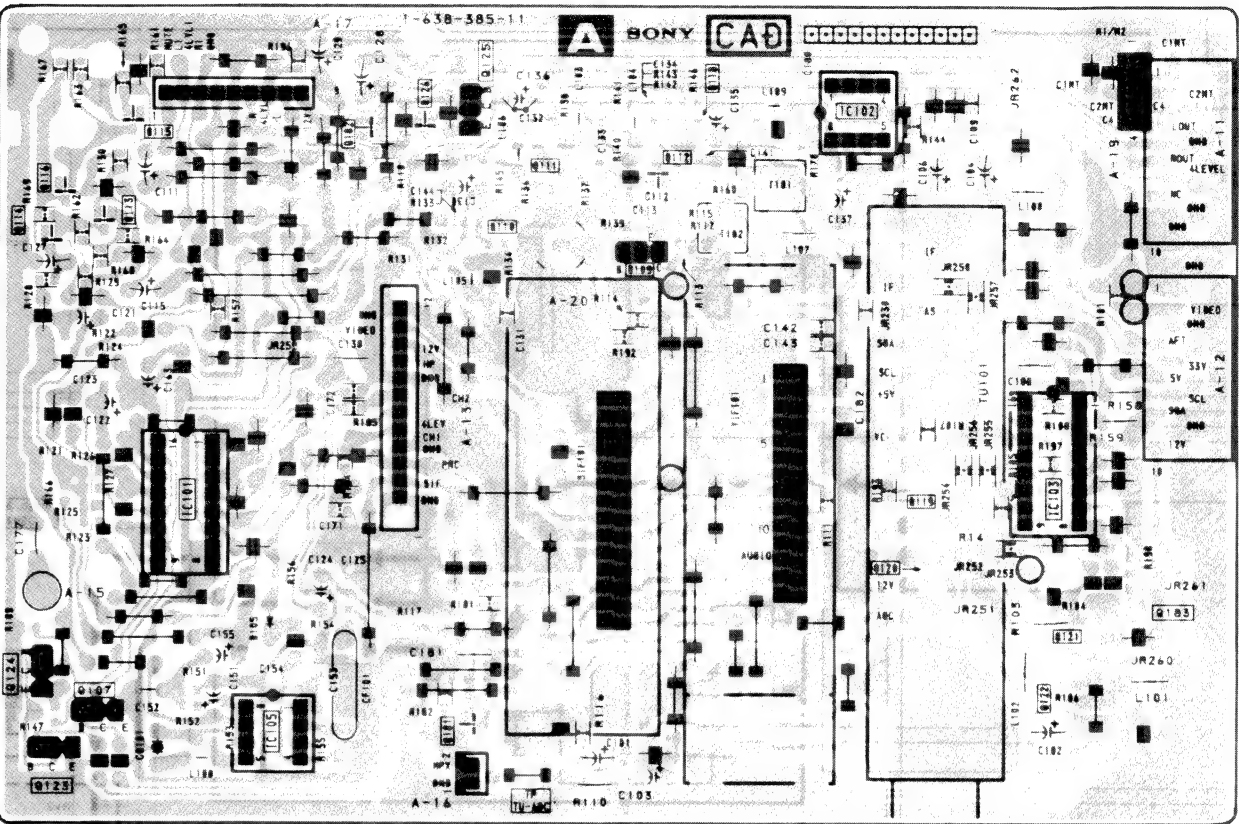
- Chip resistor is in 1/10W.
- All resistors are in ohms.  $k\Omega = 1000\Omega$ ,  $M\Omega = 1000k\Omega$
-  : nonflammable resistor.
-  : fusible resistor.
- $\triangle$  : internal component.
-  : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a  $10M\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
-  : B+ line.
-  : signal path. (RF)

Reference information

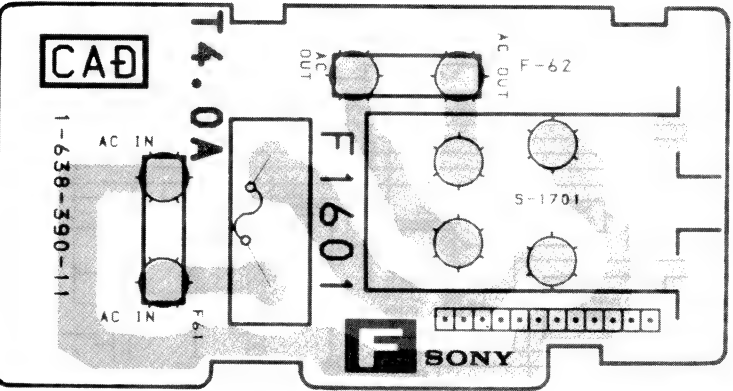
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

**A** [TUNER, SIF, VIF] **F** [AC IN, POWER SW] **J1** [AUDIO CONTROL, AV INPUT, Y/C INPUT, SCART VIDEO OUT, EAST-WEST CORRECTION] **J2** [SPEAKER TERMINAL] **VM** [KV-E2921D ONLY]

-A BOARD-



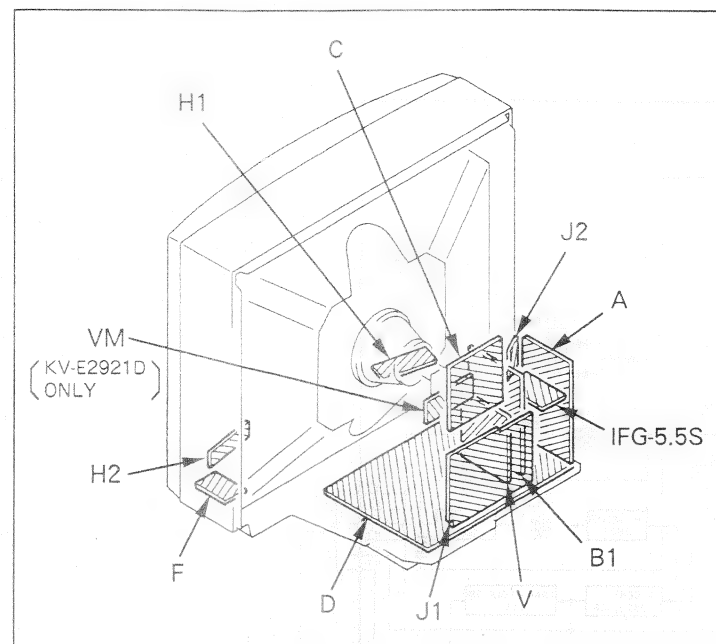
-F BOARD-



30



## 5-2. CIRCUIT BOARDS LOCATION








### 5-3. SCHEMATIC DIAGRAM AND PRINTED WIRING BOARDS

**Note:** The components identified by shading and mark  are critical for safety. Replace only with part number specified.

**Note :**

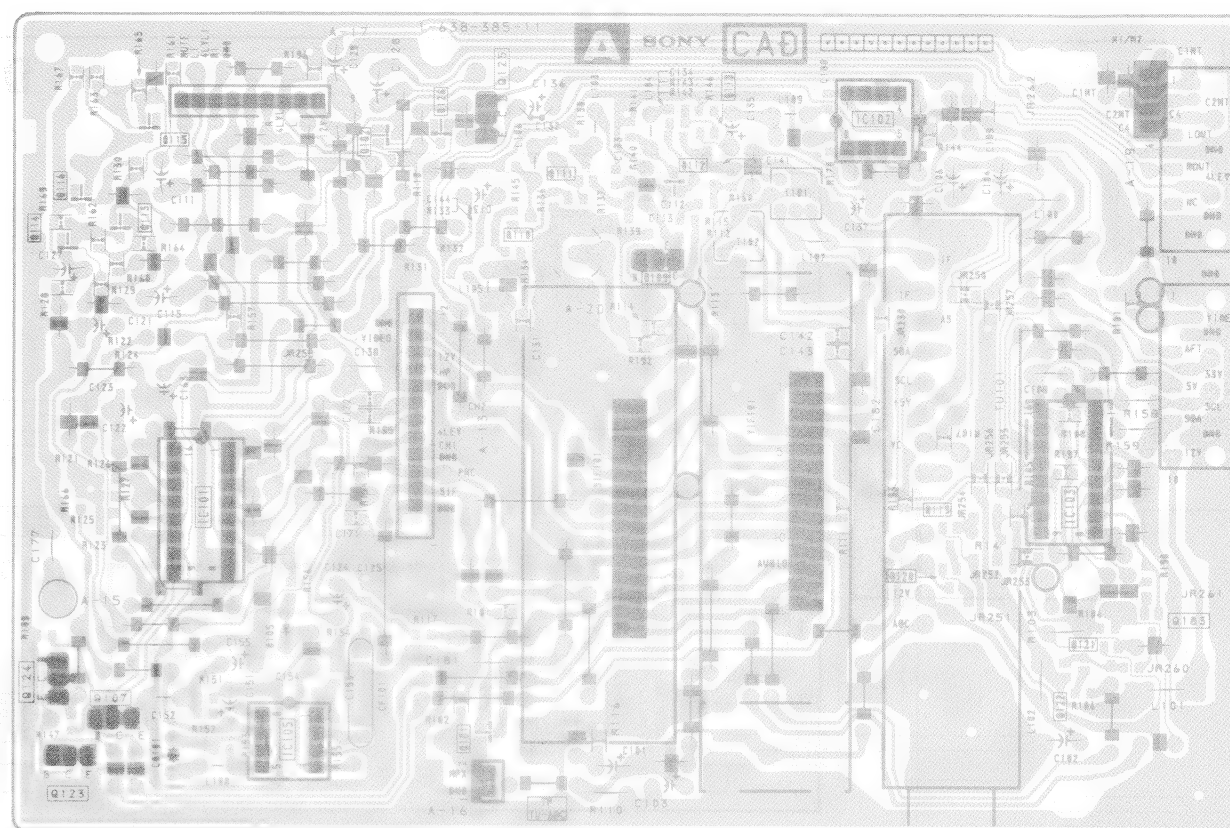
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  
 $\text{pF} : \mu\text{F}$  50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm  
Rating electrical power: 1/4W

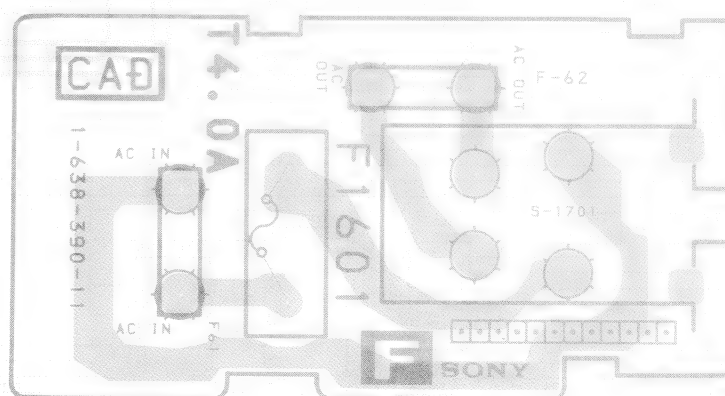
- Chip resistor is in  $1/10W$ .
- All resistors are in ohms.  $k\Omega = 1000\Omega$ ,  $M\Omega = 1000k\Omega$
-  : nonflammable resistor.
-  : fusible resistor.
- $\triangle$  : internal component.
-  : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- All voltages are in V.
- Readings are taken with a  $10M\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
-  : B + line.
-  : signal path. (RF)

**A** [ TUNER, SIF, VIF ]

— A BOARD —



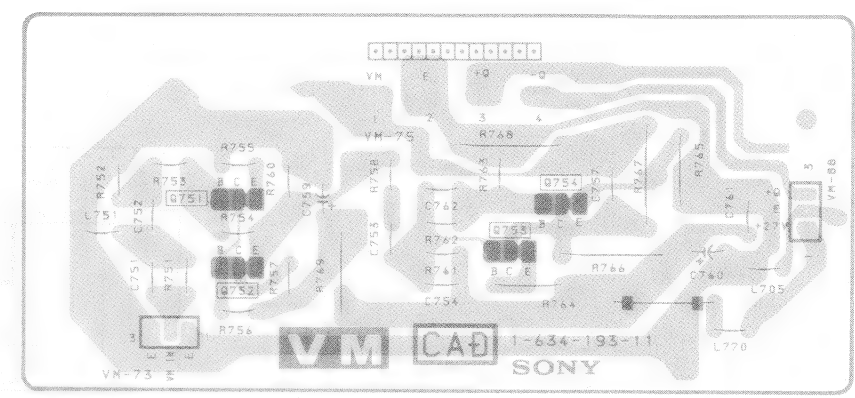
—F BOARD—





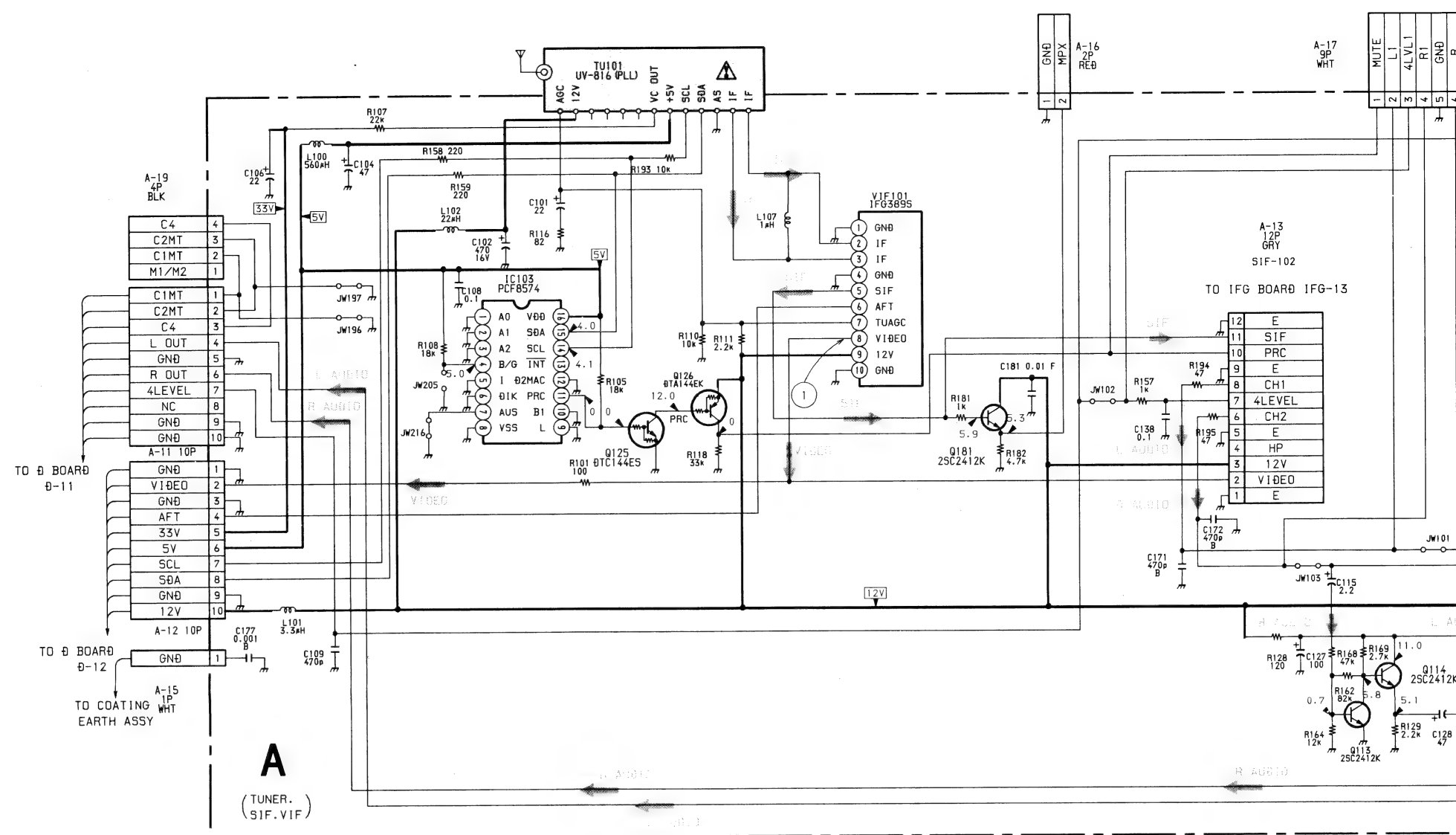
[ SIRCS, RECEIVER, ]  
[ INDICATOR ]

—VM BOARD— (KV-E2921D ONLY)





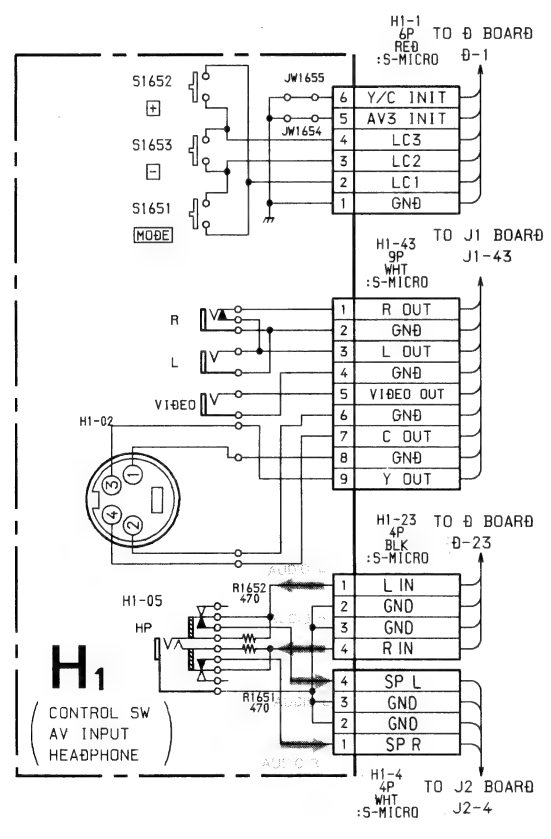
A  
B  
C  
D  
E  
F  
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H  
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J  
K  
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N  
O



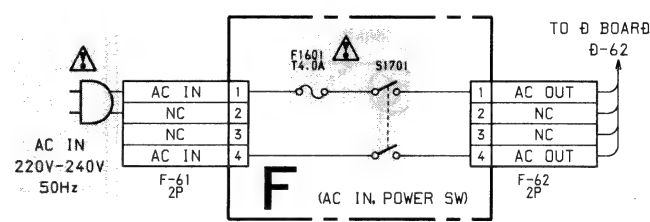
**A**  
(TUNER, SIF, VIF)

**A BOARD**

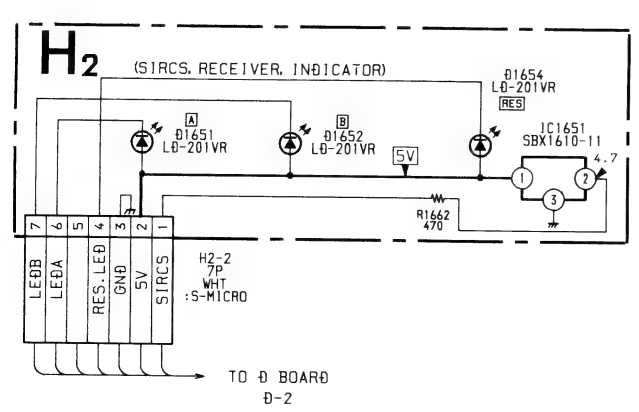
IC103	PCF8574
Q113	2SC2412
Q114	2SC2412
Q115	2SC2412
Q116	2SC2412
Q125	2SC2412
Q126	2SC2412
Q181	2SC2412



**H1**  
(CONTROL SW AV INPUT HEADPHONE)

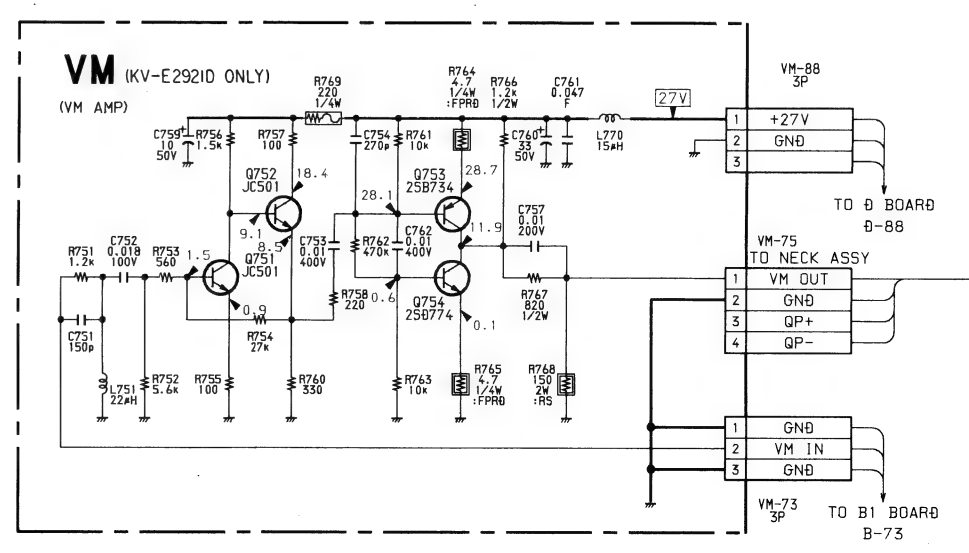


**F**  
(AC IN. POWER SW)



**H2 BOARD**

IC1651	SBX1610-11	INFRARED RECIVER
Q1651	L0-201VR	AUDIO CHANNEL A INDICATOR
Q1652	L0-201VR	AUDIO CHANNEL B INDICATOR
Q1654	L0-201VR	RESET



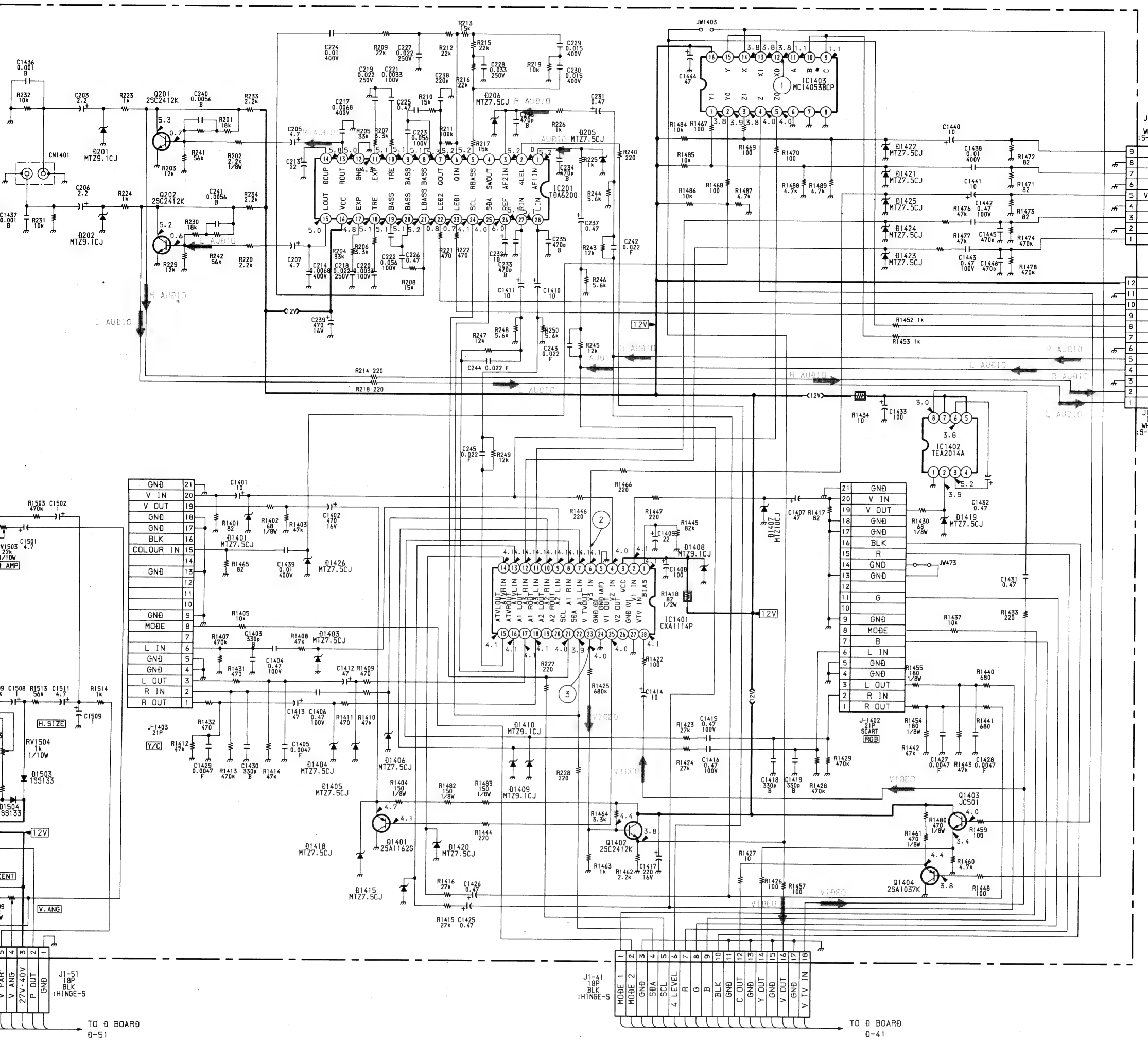
**VM BOARD (KV-E2921D ONLY)**

Q751	JC501	RE
Q752	JC501	RE
Q753	2SB734	PU
Q754	2SD774	PU

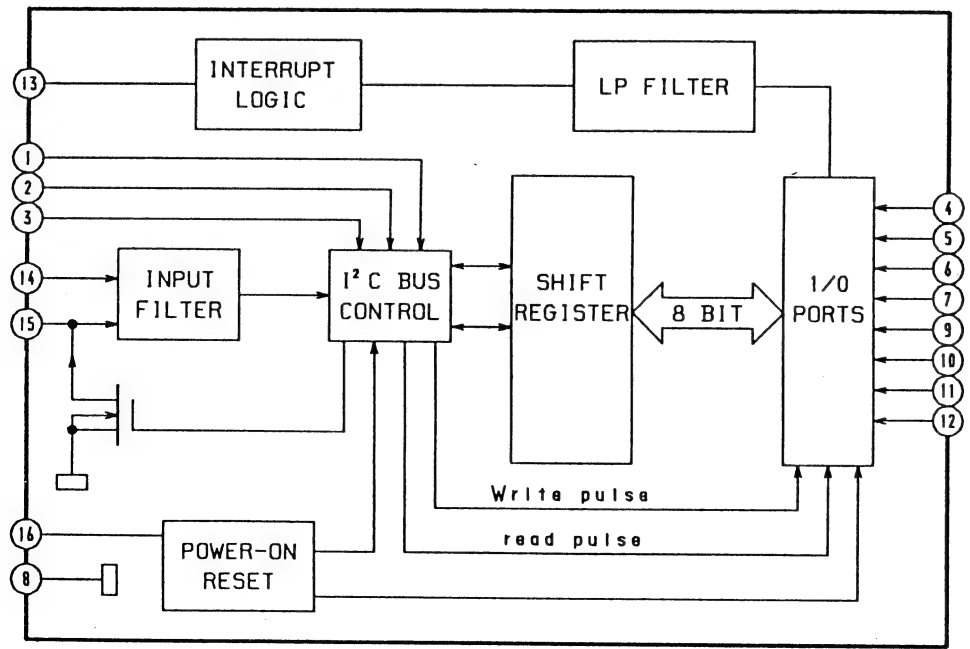








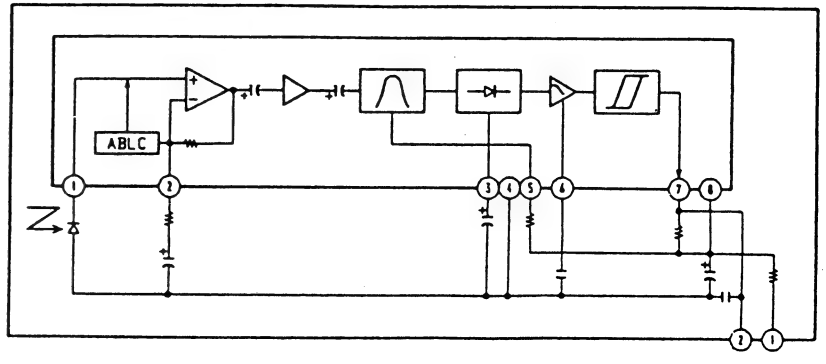
A BOARD IC103 PCF8574



J1 BOARD \*MARK

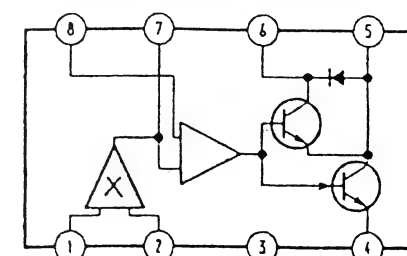
	KV-E25210	K
C1512	0.0068MF 400V	
C1514	0.022MF 250V	
C1515	820PF 50V	
R1515	680K 1/10W:CHIP	390
R1520	470K 1/10W:CHIP	390
R1550	JW	11W

H2 BOARD IC1651 SBX1610-11

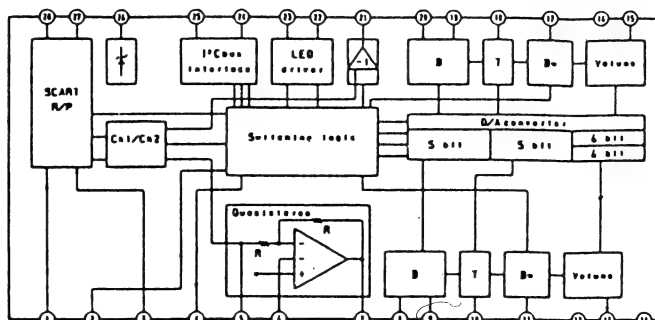




• WAVEFORMS J1 BOARD



J1 BOARD IC201 TDA6200





① PAL  5.4Vp-p (H)	① SECAM  4.8Vp-p (H)	① NTSC3.58/ NTSC4.43  5.6Vp-p (H)	② PAL  5.4Vp-p (H)
② SECAM  4.8Vp-p (H)	② NTSC3.58/ NTSC4.43  5.6Vp-p (H)	③ PAL  5.4Vp-p (H)	③ SECAM  5.0Vp-p (H)
③ NTSC3.58/ NTSC4.43  6.2Vp-p (H)	④  10.5Vp-p (H)	⑤ PAL  0.4Vp-p (H)	⑤ SECAM  0.3Vp-p (H)
⑤ NTSC3.58/ NTSC4.43  0.6Vp-p (H)	⑥ PAL/SECAM  1.1Vp-p (H)	⑥ NTSC3.58/ NTSC4.43  1.2Vp-p (H)	⑦ PAL/SECAM  1.4Vp-p (H)
⑦ NTSC3.58/ NTSC4.43  1.4Vp-p (H)	⑧ PAL  0.4Vp-p (H)	⑧ SECAM  1.0Vp-p (H)	⑧ NTSC3.58/ NTSC4.43  0.8Vp-p (H)
⑨ PAL  0.7Vp-p (H)	⑨ SECAM  1.4Vp-p (H)	⑨ NTSC3.58/ NTSC4.43  0.85Vp-p (H)	⑩ SECAM  0.2Vp-p (H)
⑪ SECAM  1.2Vp-p (H)	⑫ PAL  0.16Vp-p (H)	⑫ SECAM  0.2Vp-p (H)	⑫ NTSC3.58/ NTSC4.43  0.3Vp-p (H)
⑬ PAL  1.0Vp-p (H)	⑬ SECAM  0.8Vp-p (H)	⑬ NTSC3.58  0.9Vp-p (H)	⑬ NTSC4.43  0.95Vp-p (H)
⑭ PAL  0.8Vp-p (H)	⑭ SECAM  0.7Vp-p (H)	⑭ NTSC3.58  0.6Vp-p (H)	⑭ NTSC4.43  0.8Vp-p (H)
⑮ PAL  0.7Vp-p (H)	⑮ SECAM  0.1Vp-p (H)	⑮ NTSC3.58  0.5Vp-p (H)	⑮ NTSC4.43  0.6Vp-p (H)
⑯ PAL/SECAM  0.9Vp-p (H)	⑯ NTSC3.58  0.7Vp-p (H)	⑯ NTSC4.43  0.8Vp-p (H)	⑰ PAL  1.9Vp-p (H)
⑰ NTSC3.58  0.4Vp-p (H)	⑰ NTSC4.43  0.2Vp-p (H)	⑱ PAL  0.2Vp-p (H)	⑱ SECAM  0.8Vp-p (H)
⑲ PAL  0.6Vp-p (H)	⑲ SECAM  0.8Vp-p (H)	⑲ NTSC3.58/ NTSC4.43  0.9Vp-p (H)	

As to the voltage value shown by the mark ※ on the Schematic Diagram, see the another list.

IC・NO	PIN・NO	PAL	SECAM	NTSC 3.38	NTSC 4.43
IC301	(5)	6.7	4.8	4.8	4.8
	(15)	8.9	7.0	7.0	7.0
	(19)	3.4	3.4	3.8	3.4
	(24)	6.6	6.6	6.0	6.3
IC304	(1)	0.1	6.8	6.9	6.8
	(5)	9.9	0	9.9	9.9
	(7)	4.6	0	4.6	4.6
	(8)	3.4	3.0	3.4	3.4
	(9)	3.4	3.0	3.4	3.4
	(10)	4.6	3.4	4.6	4.6
	(11)	2.3	3.1	3.1	2.3
	(12)	5.6	5.6	5.6	7.4
	(13)	7.5	7.5	5.7	5.7
	(15)	0.1	0.1	0.1	6.0
	(16)	0.1	0.1	6.0	0.1
	(17)	0.1	6.0	0.1	0.1
	(18)	6.0	0.1	0.1	0.1
	(19)	6.0	0.1	0.1	0.1

Q・NO		PAL	SECAM	NTSC 3.38	NTSC 4.43
Q338	B	2.4	3.9	3.9	3.9
	E	3.0	4.6	4.6	4.6
Q339	B	3.0	4.6	4.6	4.6
	E	2.4	3.9	3.9	3.9
Q341	B	0	0.6	0.4	0.1
	C	11.6	0	11.6	11.6
Q342	B	0	0	0.4	0
	C	11.7	0	11.7	11.7
Q343	B	3.4	5.4	5.3	5.3
	E	2.8	4.7	4.7	4.7
Q344	B	0	5.4	1.0	0.1
	E	4.4	4.8	1.5	4.5
Q345	B	5.0	0.1	1.9	5.0
	E	4.4	4.4	1.4	4.4
Q347	B	0.6	0	0	0
	C	0.1	11.9	11.9	11.9
Q348	B	0.1	0.1	1.0	0.1
	C	1.3	0.2	0.2	0.4

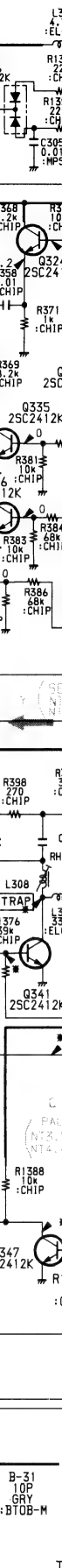
B1 BOARD

IC301	TDA4580-V4	VIDEO PROCESSOR
IC302	TDA8442-N3	D/A CONVERTOR
IC303	TDA4660T	1H DELAY
IC304	TDA4650WP	COLOR PROCESSOR
IC305	μPC24M05HF	REGULATOR
IC306	HCF4052BM1	Y/C SW
IC308	CX20061	Y INTERRUPT
IC310	CXD2011Q	COMB CONTROL
IC311	MB40968PF	D/A CONVERTER
IC312	CXK1202Q	MEMORY
IC313	CXK1202Q	MEMORY
IC315	CXD1175AM	A/D CONVERTER
Q301	2SC2412K	CANRL +BLK
Q302	2SC2412K	ON SCREEN DISPLAY SW
Q303	2SC2412K	FAS PICTURE MUTE SW
Q304	2SC2412K	ON SCREEN DISPLAY SW
Q305	DTA144EK	ANIT PRIORITY SCART
Q306	2SC2412K	STBY SW
Q307	2SC2412K	ABL
Q308	DTC124EK	MUTE
Q310	DTC124EK	SECAM SW
Q311	DTC124EK	SECAM SW
Q320	2SC2412K	HUE BUFFER
Q321	2SA1037K	CLK AMP3
Q322	2SA1037K	CLK AMP2
Q323	2SC2412K	CLK AMP1
Q324	2SC2412K	CLK BUFFER
Q327	2SA1037K	Y OUT
Q328	2SA1037K	VIDEO IN
Q329	2SA1037K	Y IN
Q330	2SC2412K	VIDEO BUFFER
Q331	2SA1037K	C OUT
Q332	2SA1037K	C IN
Q333	DTC124EK	Y/C SW
Q334	DTC124EK	Y SW
Q335	2SC2412K	SECAM SW
Q336	2SC2412K	NTSC (3.58) SW
Q337	2SC2412K	NTSC (4.43) SW
Q338	2SA1037K	Y BUFFER
Q339	2SC2412K	Y BUFFER
Q340	2SC2412K	Y BUFFER
Q341	2SC2412K	SECAM TRAP SW
Q342	2SC2412K	NTSC TRAP SW
Q343	2SC2412K	C OUT
Q344	2SC2412K	SECAM SW
Q345	2SC2412K	PAL/SECAM SW
Q346	2SC2412K	Y IN
Q347	2SC2412K	PAL SW
Q348	DTC124EK	NTSC (3.58) SW
Q350	2SA1037KQR	CLK AMP
Q352	2SC2412K	VIDEO AMP
Q353	2SA1037KQR	BUFFER
Q354	2SA1037KQR	BUFFER
Q355	2SA1037KQR	VIDEO AMP
Q356	2SC2412K	VIDEO BUFFER
Q357	2SC2412K	CLAMP BIAS
Q358	2SA1037KQR	VIDEO CLAMP
Q359	2SC2412K	CLAMP BIAS
Q360	2SA1037KQR	CLK BUFFER
Q361	2SA1037KQR	CLK AMP
Q362	2SA1037KQR	Y BUFFER
Q363	2SA1037KQR	C BUFFER
Q364	2SC2412K	C BUFFER
Q365	2SC2412K	Y BUFFER
Q366	2SC2412K	SHP BUFFER
Q367	2SC2412K	Y BUFFER
Q368	2SC2412K	SHP AMP
Q369	2SC2412K	SHP AMP
Q370	2SC2412K	SHP AMP
Q371	2SC2412K	VM BUFFER
Q372	2SC2412K	VM AMP
Q373	DTC124EK	
Q1301	DTC124EK	Y BUFFER
Q1302	2SC2412K	Y BUFFER
Q1303	2SC2412K	VM MUTE
Q301	1MN10	ACO AT ATBY
Q304	0AN212K	PROTECT
Q305	0AN212K	PROTECT
Q307	MA3110M	PROTECT
Q308	0AN212K	PROTECT
Q309	0AN212K	PROTECT
Q310	MA3110M	PROTECT
Q311	MA3110M	PROTECT
Q312	MA3110M	PROTECT
Q314	0A204K	PROTECT
Q318	0A204K	PROTECT
Q319	0A204K	PROTECT
Q320	0A204K	PROTECT
Q321	MA3056	REG
Q322	0AN212K	PROTECT
Q330	0AN212K	BIAS
Q331	0AP202K	Y/C SW
Q333	1MN10	SYSTEM SW
Q336	0AN202K	CORRECT SW
Q340	0A204K	VIDEO AMP
Q341	0AN212K	VIDEO AMP

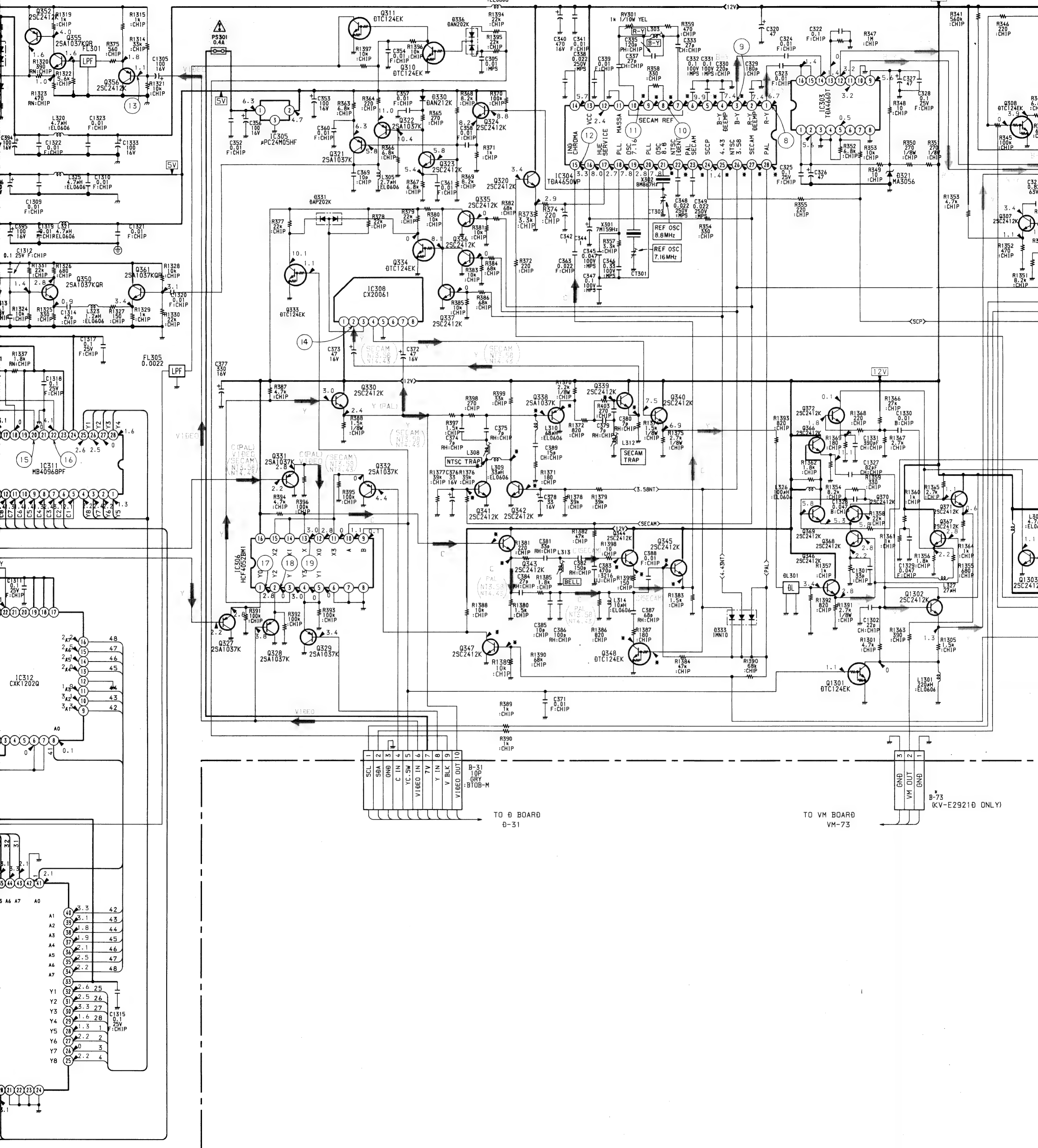
B1 BOARD \*MARK

	KV-E2521D	KV-E2921D
R343	560 Ω 1/10W	2.2k 1/10W
R1308	0 Ω 1/10W	4.7k 1/10W
B-73	OPEN	3P

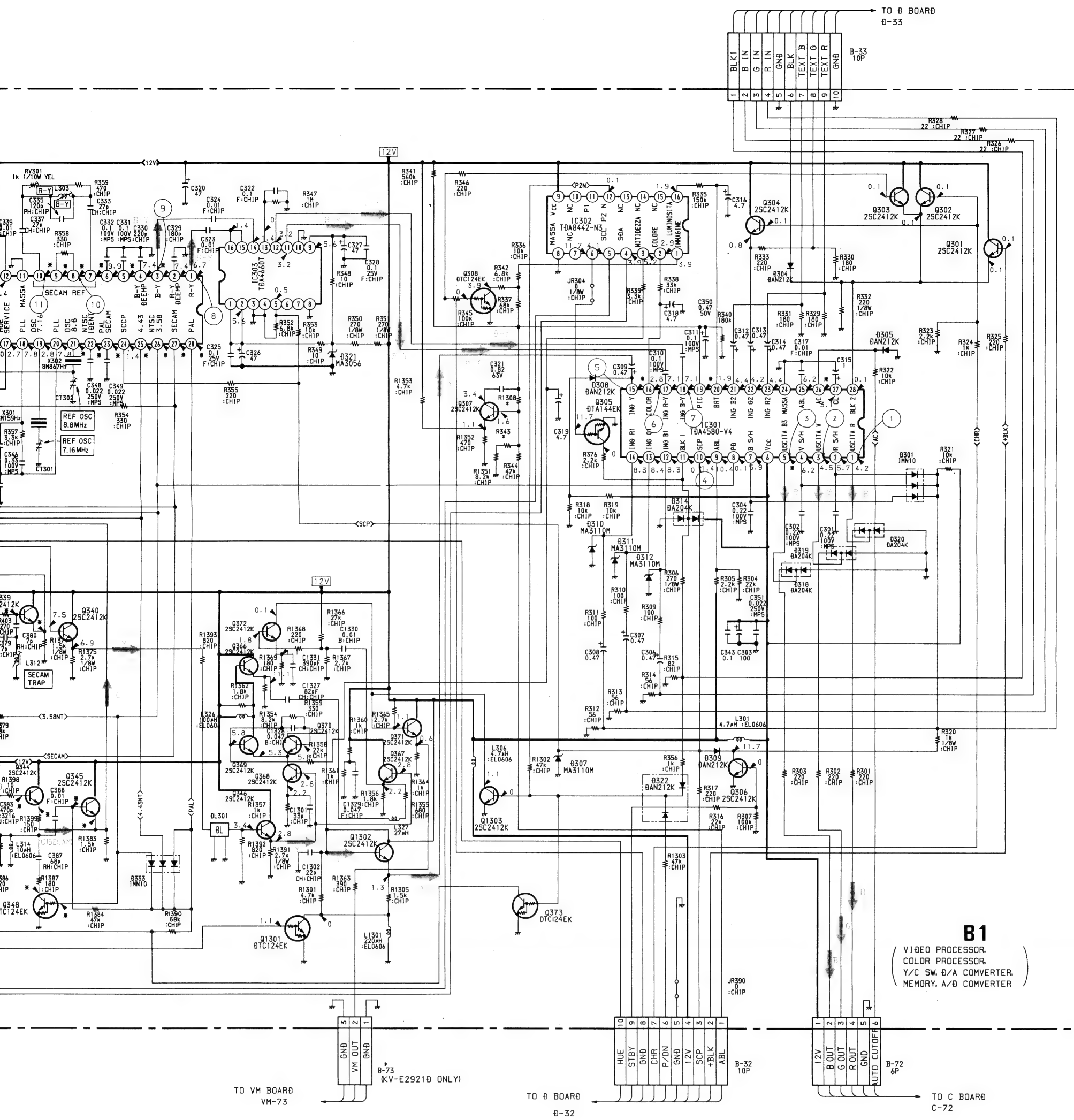






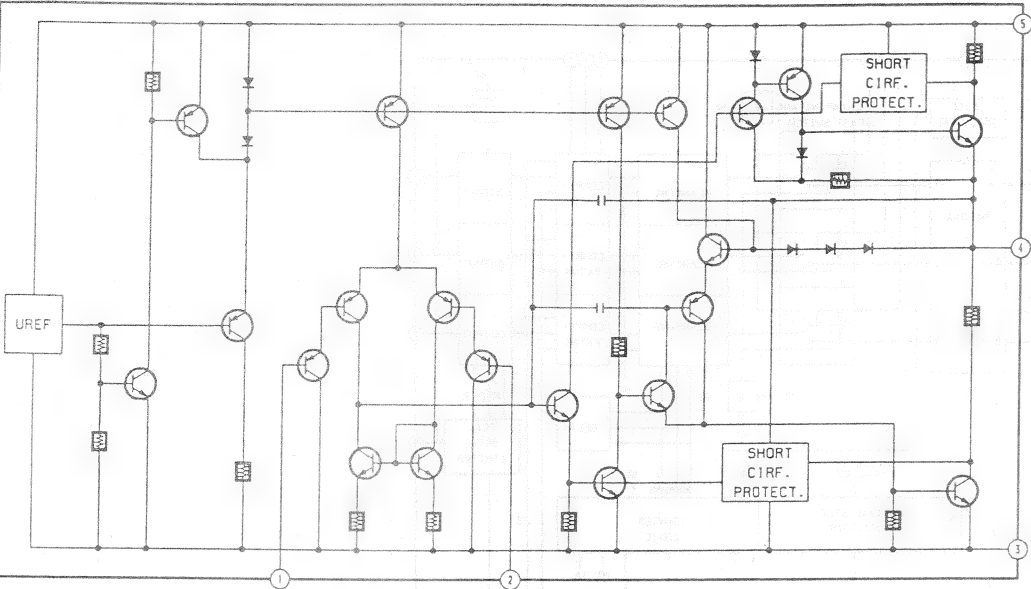




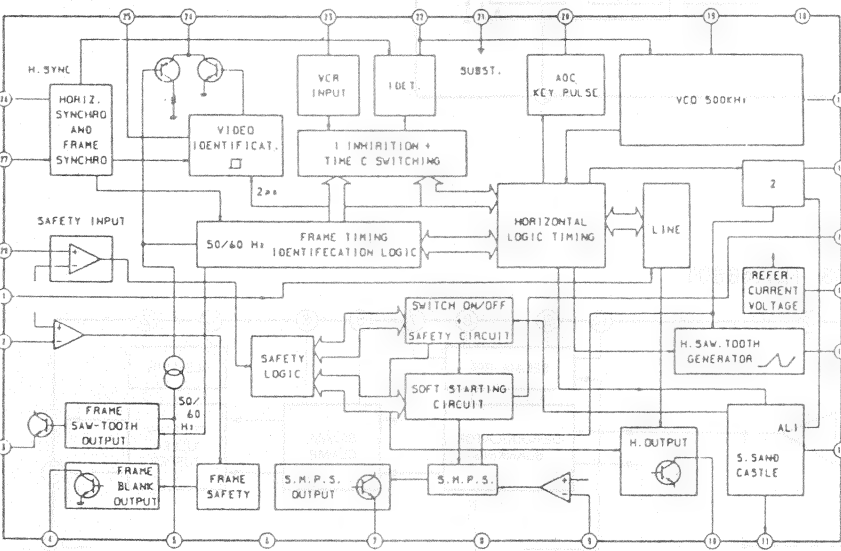




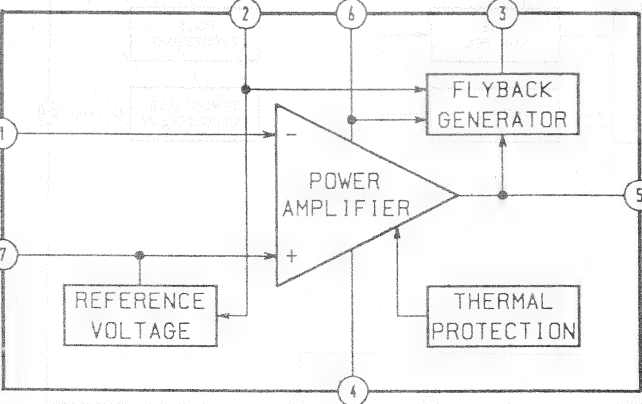
D BOARD IC251/261 TDA2050



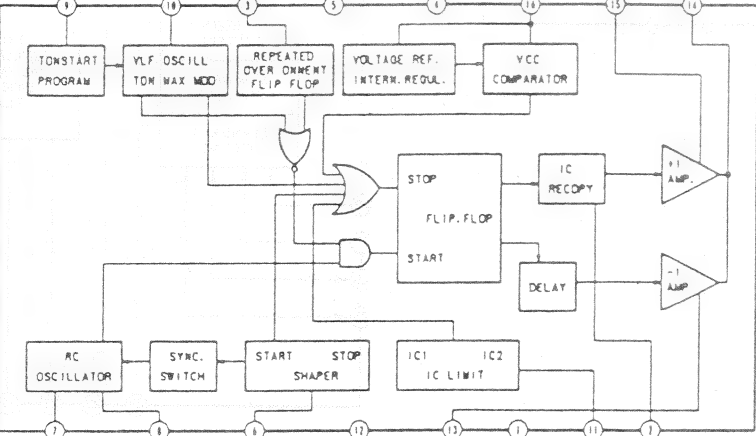
D BOARD IC501 TEA2028B



D BOARD IC502 TDA8170



D BOARD IC601 TEA2260



**D** [ TUNING CONTROL, POWER CONTROL, AUDIO OUT, H/V OUT ]

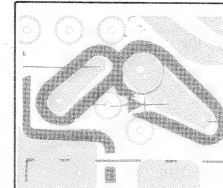
-D BOARD-



IC		D010	I-2
IC001	B-2	D011	I-2
IC002	E-2	D012	D-2
IC003	D-1	D013	E-2
IC005	H-2	D271	C-6
IC251	G-5	D501	I-8
IC261	D-5	D504	F-6
IC501	H-7	D506	H-7
IC502	G-7	D508	J-6
IC601	A-8	D509	F-7
IC604	A-5	D511	G-7
IC608	B-3	D512	G-7
		D513	G-7
		D514	G-6
		D515	F-6
		D601	A-8
		D602	C-8
		D603	A-7
		D604	A-7
		D605	C-8
		D606	C-8
		D607	B-8
		D608	C-9
		D609	B-8
		D610	C-5
		D611	E-7
		D612	B-5
		D613	A-6
		D614	A-6
		D616	E-6
		D617	B-7
		D618	E-6
		D619	B-8
		D620	E-6
		D621	B-8
		D622	E-6
		D623	B-5
		D624	C-5
		D630	E-7
		D801	G-10
		D802	H-12
		D803	I-13
		D804	F-9
		D805	F-9
		D806	F-12
		D807	F-12
		D808	E-11
D		VR	
D003	B-3	RV501	G-6
D005	I-2	RV502	I-8
D006	G-1	RV601	A-8
D007	B-2		
D009	F-1		



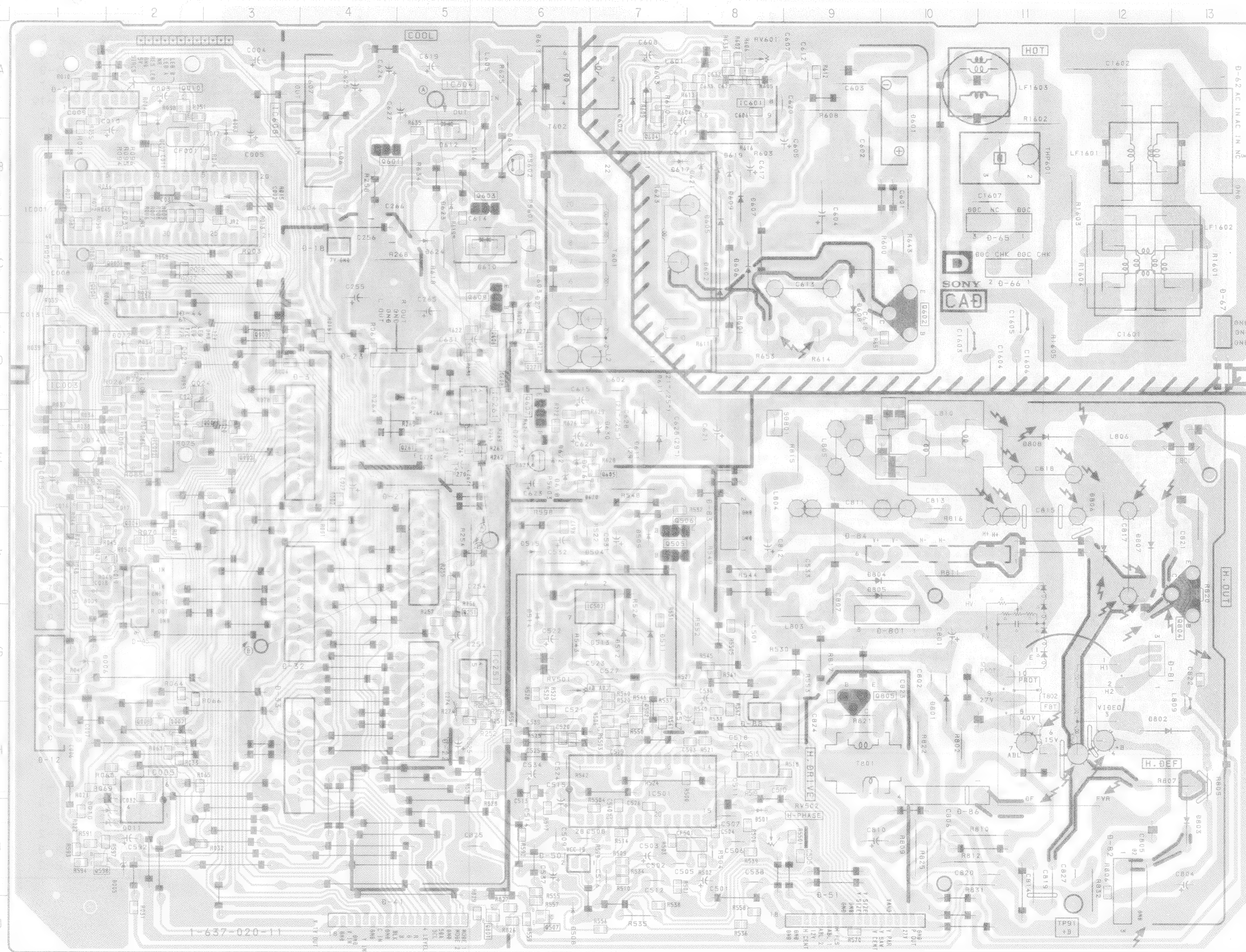
**D** [TUNING CONTROL, POWER CONTROL,  
AUDIO OUT, H/V OUT]



**NOTE:**  
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

**-D BOARD-**

IC		D010		I-2	
IC001	B-2	D011	I-2	D012	D-2
IC002	E-2	D013	E-2	D014	E-2
IC003	D-1	D271	C-6	D272	E-6
IC005	H-2	D501	I-8	D504	F-6
IC261	G-5	D506	H-7	D508	J-6
IC501	H-7	D509	F-7	D511	G-7
IC502	G-7	D512	G-7	D513	G-7
IC601	A-8	D514	G-6	D515	F-6
IC604	A-5	D601	A-8	D602	C-8
IC608	B-3	D603	A-7	D604	A-7
TR		D605	C-8	D606	C-8
Q001	E-2	D607	B-8	D608	C-9
Q002	E-3	D609	B-8	D610	C-5
Q003	E-1	D611	E-7	D612	B-5
Q004	F-2	D613	A-6	D614	A-6
Q005	C-2	D616	E-6	D617	B-7
Q006	C-1	D618	E-6	D619	B-8
Q007	H-2	D620	E-6	D621	B-8
Q008	H-2	D622	E-6	D623	B-5
Q009	D-3	D624	C-5	D630	E-7
Q010	A-2	D801	G-10	D802	H-12
Q251	G-5	D803	I-13	D804	F-9
Q261	E-5	D805	F-9	D806	F-12
Q271	D-6	D807	F-12	D808	E-11
Q502	H-7	VR			
Q505	F-7	RV501	G-6	RV502	I-8
Q506	F-7	RV601	A-8		
Q507	J-6				
Q598	I-2				
Q601	B-4				
Q602	C-10				
Q603	B-5				
Q604	A-7				
Q605	E-7				
Q606	D-5				
Q607	D-6				
Q608	D-6				
Q609	C-5				
Q801	J-6				
Q804	G-13				
Q805	G-9				
D		VR			
D003	B-3	RV501	G-6		
D005	I-2	RV502	I-8		
D006	G-1	RV601	A-8		
D007	B-2				
D009	F-1				





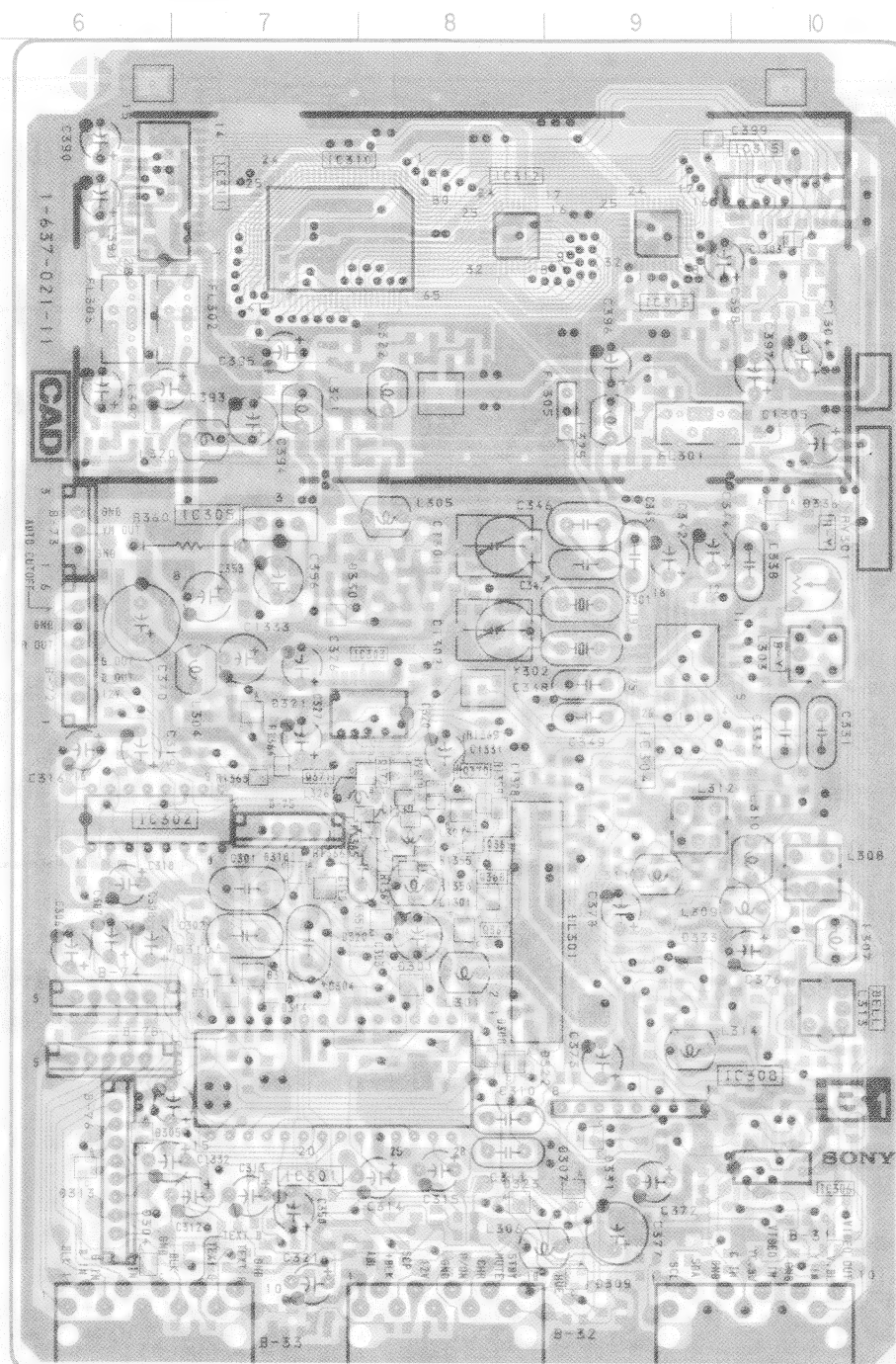
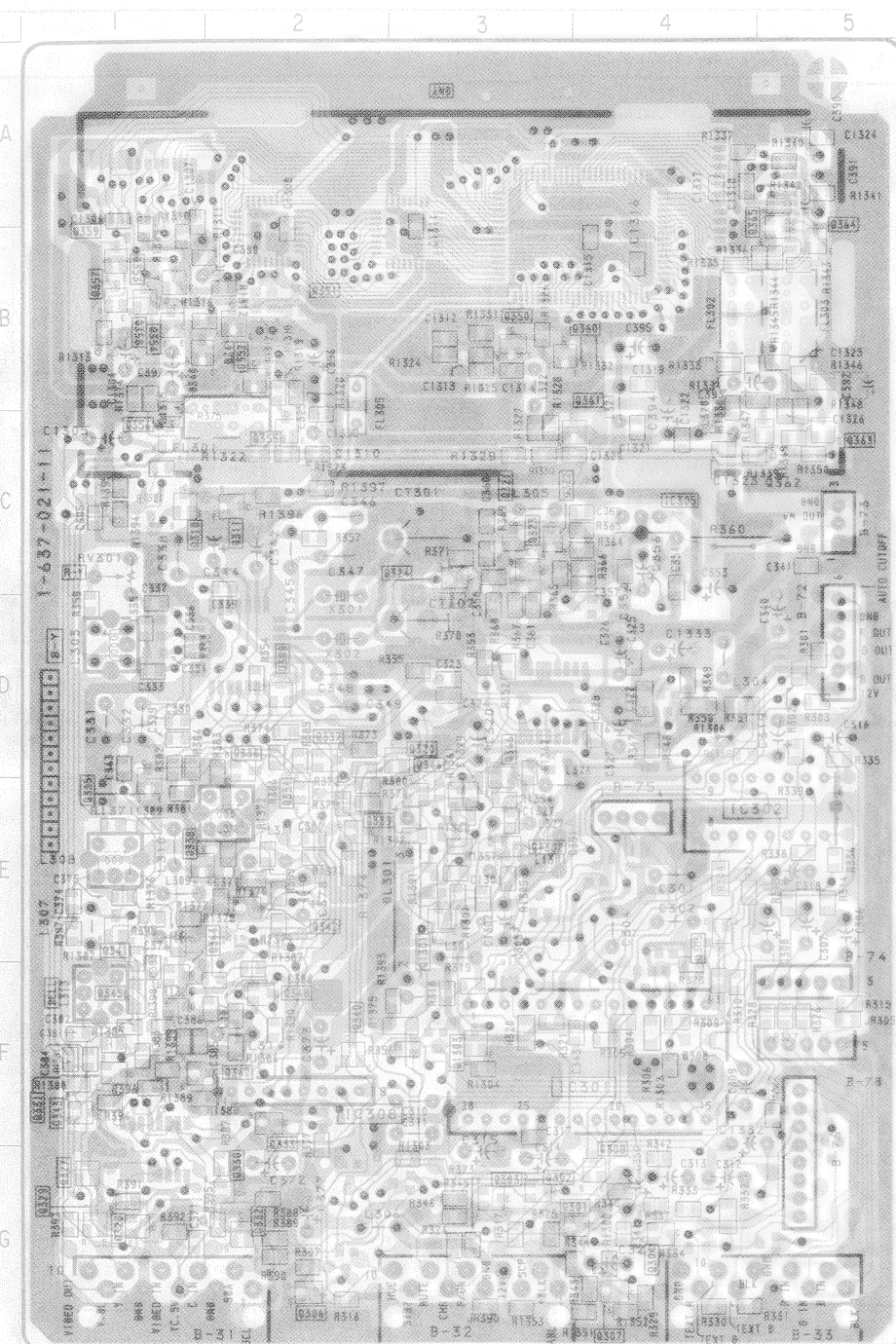
**B1**

VIDEO PROCESSOR, COLOR PROCESSOR,  
Y/C SW, D/A CONVERTER, MEMORY,  
A/D CONVERTER

—B1 BOARD—

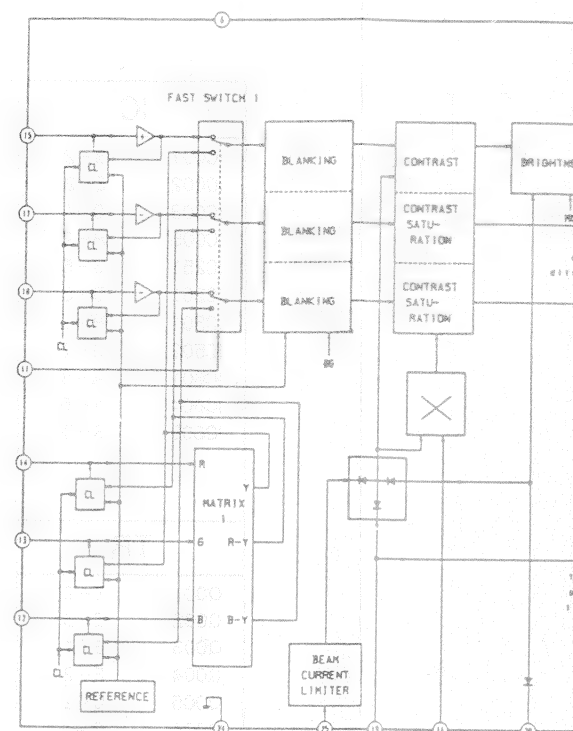
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

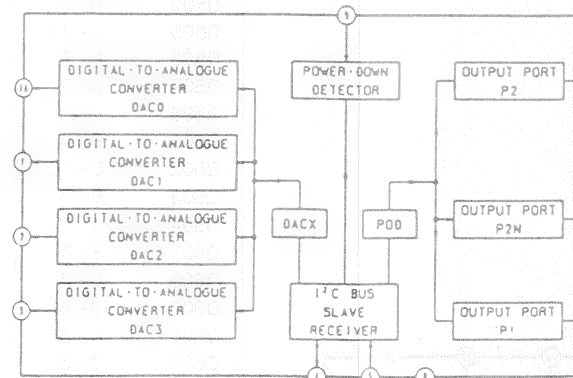


IC			
IC301	F-7	Q353	B-1
IC302	E-6	Q354	B-1
IC303	D-8	Q355	C-2
IC304	D-9	Q356	C-1
IC305	C-7	Q357	B-1
IC306	G-10	Q358	B-1
IC308	F-9	Q359	B-1
IC310	A-7	Q360	B-3
IC311	A-7	Q361	C-4
IC312	B-8	Q362	C-5
IC313	B-9	Q363	C-5
IC315	A-10	Q364	B-5
		Q365	A-5
		Q366	D-3
		Q367	E-8
		Q368	E-8
		Q369	E-8
		Q370	E-8
		Q371	D-8
		Q372	D-8
		Q373	
		Q1301	E-3
		Q1302	E-3
		Q1303	F-3
TR			
Q301	G-3		
Q302	G-3		
Q303	G-3		
Q304	G-4		
Q305	E-4		
Q306	G-2		
Q307	G-4		
Q308	G-4		
Q310	C-1		
Q311	C-2		
Q320	D-3		
Q321	C-3		
Q322	C-3		
Q323	C-3		
Q324	C-3		
Q327	G-1		
Q328	G-1		
Q329	G-1		
Q330	G-2		
Q331	F-1		
Q332	G-2		
Q333	F-2		
Q334	E-2		
Q335	E-1		
Q336	D-2		
Q337	D-2		
Q338	E-1		
Q339	E-2		
Q340	F-2		
Q341	E-1		
Q342	E-2		
Q343	F-1		
Q344	F-1		
Q345	F-1		
Q346	E-3		
Q347	F-1		
Q348	F-2		
Q350	B-3		
Q352	B-2		
		D	
		D301	F-8
		D304	G-6
		D305	F-6
		D307	G-9
		D308	F-8
		D309	G-9
		D310	E-7
		D311	F-7
		D312	E-7
		D314	F-7
		D318	E-7
		D319	E-7
		D320	E-8
		D321	D-7
		D322	F-8
		D330	D-7
		D331	F-9
		D333	E-9
		D336	C-10
		D340	B-1
		D341	B-2
		VR	
		RV301	C-10

B1 BOARD IC301 TDA4580-V4



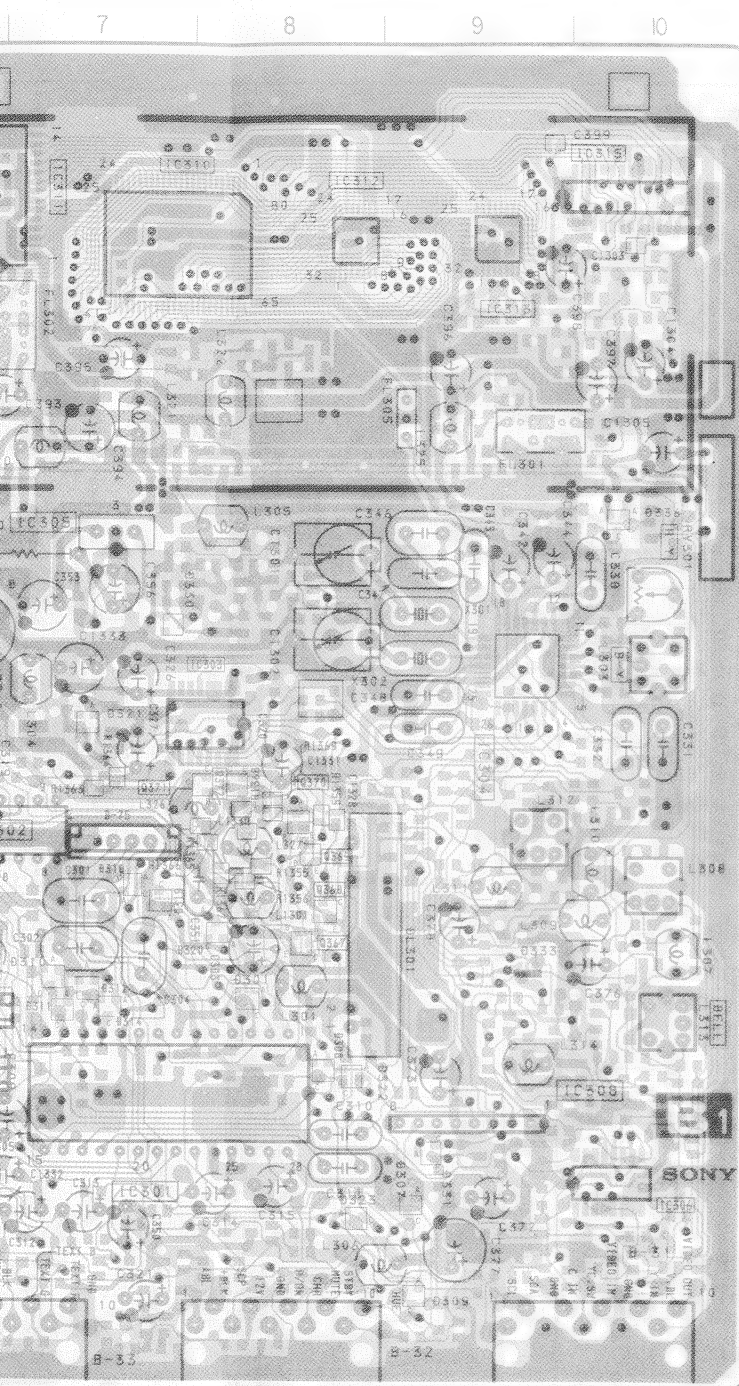
B1 BOARD IC302 TDA8442-N3





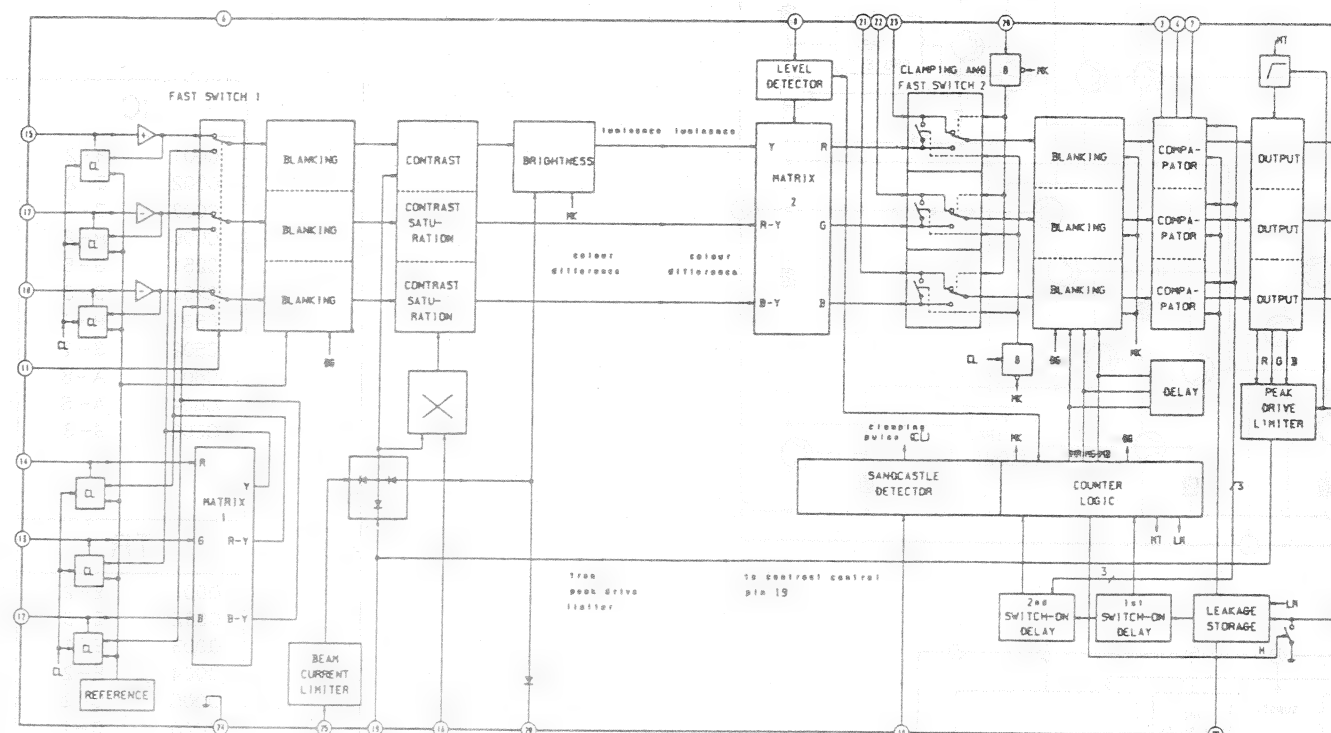
Note:

- Pattern from the side which enables seeing.
- Pattern of the rear side.

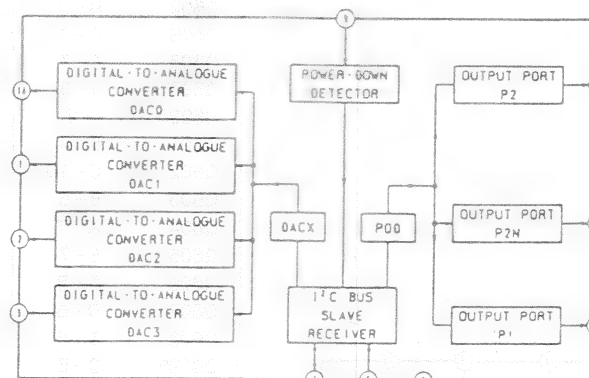


IC			
IC301	F-7	Q353	B-1
IC302	E-6	Q354	B-1
IC303	D-8	Q355	C-2
IC304	D-9	Q356	C-1
IC305	C-7	Q357	B-1
IC306	G-10	Q358	B-1
IC308	F-9	Q359	B-1
IC310	A-7	Q360	B-3
IC311	A-8	Q361	C-4
IC312	B-8	Q362	C-5
IC313	B-9	Q363	C-5
IC315	A-10	Q364	B-5
		Q365	A-5
		Q366	D-3
		Q367	E-8
		Q368	E-8
		Q369	E-8
		Q370	E-8
		Q371	D-8
		Q372	D-8
		Q373	
		Q1301	E-3
		Q1302	E-3
		Q1303	F-3
TR			
Q301	G-3		
Q302	G-3		
Q303	G-3		
Q304	G-4		
Q305	E-4		
Q306	G-2		
Q307	G-4		
Q308	G-4		
Q310	C-1		
Q311	C-2		
Q320	D-3		
Q321	C-3		
Q322	C-3		
Q323	C-3		
Q324	C-3		
Q327	G-1		
Q328	G-1		
Q329	G-1		
Q330	G-2		
Q331	F-1		
Q332	G-2		
Q333	F-2		
Q334	E-2		
Q335	E-1		
Q336	D-2		
Q337	D-2		
Q338	E-1		
Q339	E-2		
Q340	F-2		
Q341	E-1		
Q342	E-2		
Q343	F-1		
Q344	F-1		
Q345	F-1		
Q346	E-3		
Q347	F-1		
Q348	F-2		
Q350	B-3		
Q352	B-2		
		D	
		D301	F-8
		D304	G-6
		D305	F-6
		D307	G-9
		D308	F-8
		D309	G-9
		D310	E-7
		D311	F-7
		D312	E-7
		D314	F-7
		D318	E-7
		D319	E-7
		D320	E-8
		D321	D-7
		D322	F-8
		D330	D-7
		D331	F-9
		D333	E-9
		D336	C-10
		D340	B-1
		D341	B-2
		VR	
		RV301	C-10

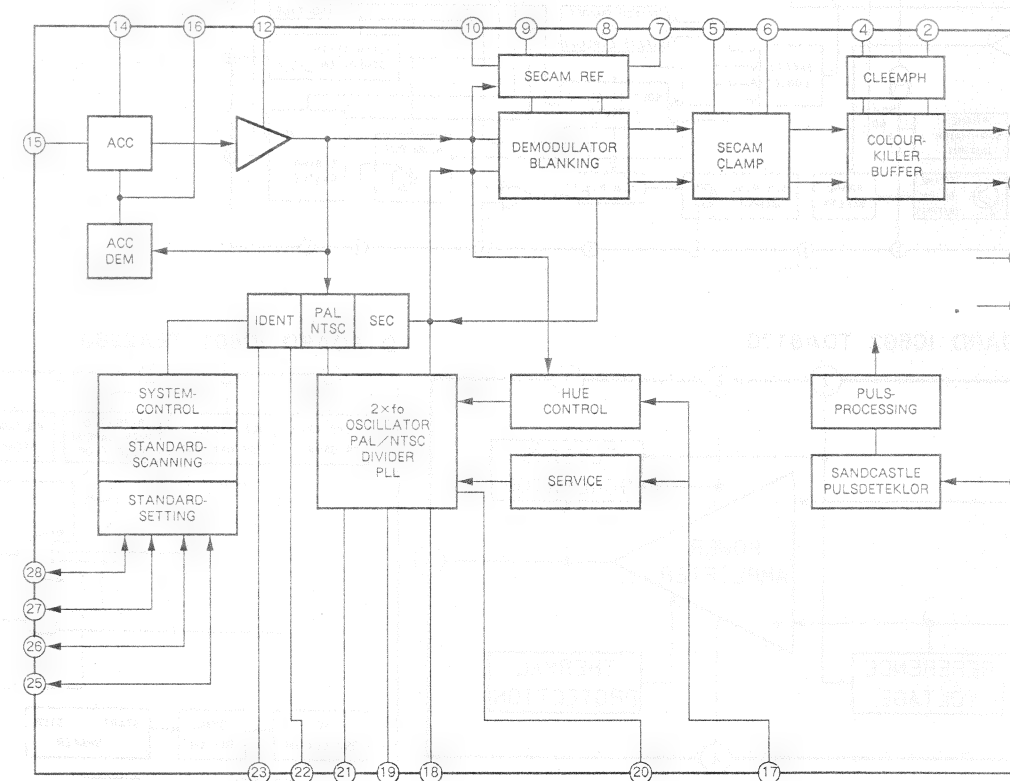
B1 BOARD IC301 TDA4580-V4



B1 BOARD IC302 TDA8442-N3



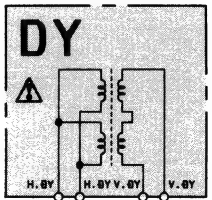
B1 BOARD IC303 TDA4660T





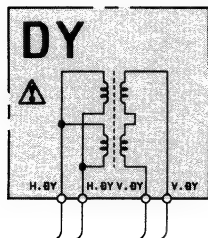
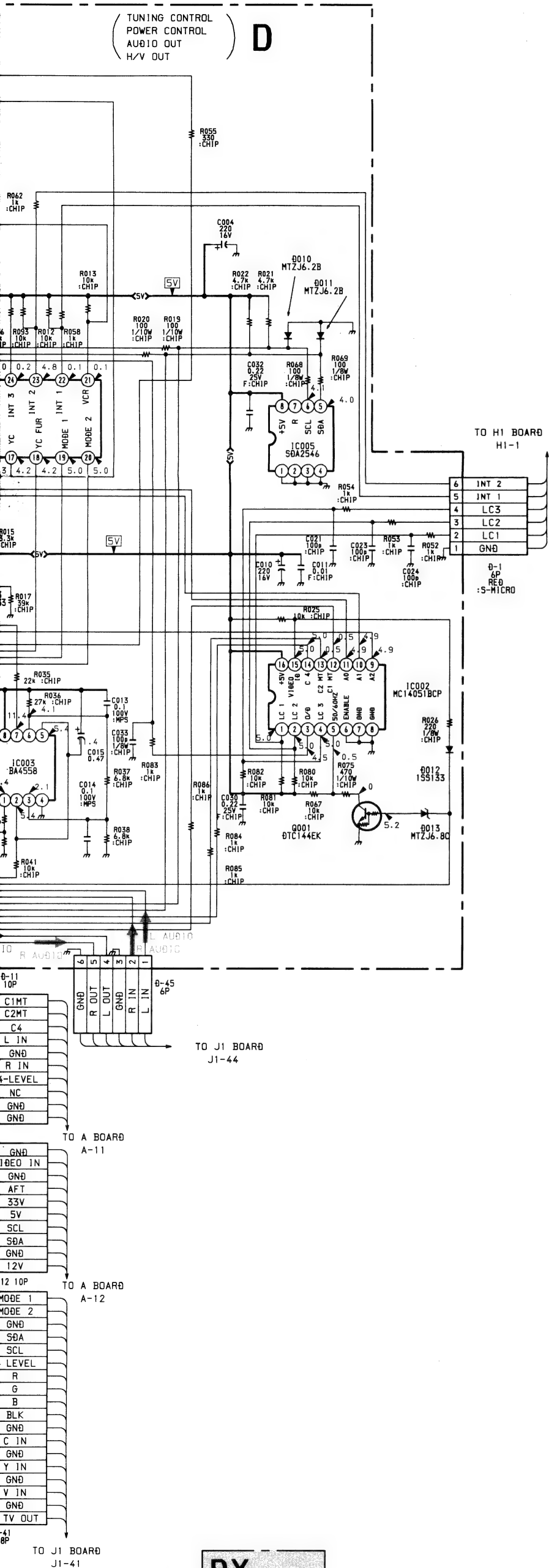








TO H2 BOARD  
H2-2  
0-2  
7P  
H2T  
S-MICRO



D BOARD

IC001	S0A20560	TUNING CTL
IC002	MC14051BCP	ON SCREEN DISPLAY
IC003	BA4558	AFT COMPARATOR
IC005	S0A2546	MY MEMORY
IC251	T0A2050	AUDIO OUT (L)
IC261	T0A2050	AUDIO OUT (R)
IC501	TEA2028B	DEFLECTION PROCESSOR
IC502	T0A8170	V OUT
IC601	TEA2260	PRIMARY SMRS CTL
IC604	TEA7605	+5V REG
IC608	TYA7812CT	+12V REG
Q001	0TC144EK	50/60Hz SW
Q002	0TA144EK	REG SW
Q003	2SA1037-K	SYNC SEPARATOR
Q004	2SA1037-K	SYNC SEPARATOR
Q005	0TC144EK	Y/C SW
Q006	0TC144EK	FRONT/REAR SW
Q007	2SC2412-K	MODE 2 SWITCH
Q008	2SC2412-K	MODE 1 SWITCH
Q009	2SC2412-K	MUTE SW
Q010	2SC2412-K	RESET
Q251	2SC2412-K	AUDIO MUTO
Q261	2SC2412-K	AUDIO MUTO
Q271	2SC2412-K	VOLTAGE DETECT
Q502	2SA1037-K	CONSTANT CURRENT SOURCE
Q505	2SD774	V CENT
Q506	2SB734	V CENT
Q507	2SA1037-K	CANAL +BLK
Q598	2SA1037-K	VIDEO AMP
Q601	2SB1357T114EF	STBY SW
Q602	SD1545	REG OUT
Q603	2SB1357T114EF	STBY SW
Q604	2SA1037-K	FAST ON/OFF
Q605	2SC2412-K	STBY SW
Q606	2SC2412-K	STBY SW
Q607	2SD2096-EF	+12V REG
Q608	2SC2412K	STBY SW
Q609	2SD789-3	STBY SW
Q801	2SC2412-K	ABL AMP
Q804	BU508	H OUT
Q805	2SC2688	H DRIVER
0003	1SS133	HUE CTL
0005	MTZJ5.6B	PROT
0006	MTZJ33A	VC VOLTAGE REGULATION
0007	MTZJ3.9B	PLOT RESET
0009	MTZJ5.6B	CLIPPING SYNC LEVEL
0010	MTZJ6.2B	PROT
0011	MTZJ6.2B	PROT
0012	1SS133	PROT
0013	MTZJ6.8C	PROT
0271	MTZJ13B	VOLTAGE DETECT
0272	1SS133	DECOUPING MUTE AUDIO
0501	1SS133	START
0504	GP080PKG23	V PULSE OUT
0506	0A204K	CURRENT (KV-E25210 ONLY)
0508	1SS133	CANAL +BLK LEVEL
0509	1SS133	V LIN
0511	GP080PKG23	PROT
0512	GP080PKG23	PROT
0513	MTZJ4.7B	PROT
0514	1SS133	PROT (KV-E29210 ONLY)
0515	1SS133	PROT (KV-E29210 ONLY)
0601	04SB60L-F	AC RECT
0602	RGP106PKG23	REF RECT
0603	GP080PKG23	SMPS DRIVE 1
0604	GP080PKG23	SMPS DRIVE 2
0605	GP080PKG23	SMPS DRIVE 3
0606	RGP106PKG23	+12V RECT
0607	RGP106PKG23	REF RECT
0608	ERC25-06S	PLUSE CLIPPER
0609	MTZJ33A	FAST ON/OFF
0610	CTU-12S	+14V RECT
0611	ER029-08J	+135VRECT
0612	CTU-12S	+7V RECT
0613	RGP15JPKG23	AF V RECT-1
0614	RGP15JPKG23	AF V RECT-2
0616	MTZJ6.2B	+12V REG
0617	1SS133	PROT
0618	MTZJ5.6B	+12V REF
0619	MTZJ33A	FAST ON/OFF-2
0620	0A204K	+12V REF
0621	MTZJ33A	FAST ON/OFF-3
0622	1SS133	PROT
0623	1SS133	DECOUPING STBY
0624	1SS133	DECOUPING DTBY
0630	MTZJ15A	+12V REF
0801	RGP106PKG23	+27V REF
0802	RGP106PKG23	+200V REF
0803	RGP02-17	G2 REF
0804	GP080PKG23	H CENTER-1
0805	GP080PKG23	H CENTER-2
0806	ERC06-15S	H DAMPER-1
0807	ERC06-15S	H DAMPER-2
0808	ER029-08J	PIN DAMPER



BOARD

A20560	TUNING CTL
14051BCP	ON SCREEN DISPLAY
4558	AFT COMPARE
A2546	MY MEMORY
A2050	AUDIO OUT (L)
A2050	AUDIO OUT (R)
A2028B	DEFLECTION PROCESSOR
A8170	V OUT
A2260	PRIMARY SMRS CTL
A7605	+5V REG
A7812CT	+12V REG
C144EK	50/60Hz SW
A144EK	REG SW
A1037-K	SYNC SEPARATOR
A1037-K	SYNC SEPARATOR
C144EK	Y/C SW
C144EK	FRONT/REAR SW
C2412-K	MODE 2 SWITCH
C2412-K	MODE 1 SWITCH
C2412-K	MUTE SW
C2412-K	RESET
C2412-K	AUDIO MUTO
C2412-K	AUDIO MUTO
C2412-K	VOLTAGE DETECT
A1037-K	CONSTANT CURRENT SOURCE
B774	V CENT
B734	V CENT
A1037-K	CANAL +BLK
A1037-K	VIDEO AMP
B1357T114EF	STBY SW
A1545	REG OUT
B1357T114EF	STBY SW
A1037-K	FAST ON/OFF
C2412-K	STBY SW
C2412-K	STBY SW
B2096-EF	+12V REG
C2412K	STBY SW
B789-3	STBY SW
C2412-K	ABL AMP
B508	H OUT
C2688	H DRIVER
SS133	HUE CTL
TZJ5.6B	PROT
TZJ33A	VC VOLTAGE REGULATION
TZJ3.9B	PLOT RESET
TZJ5.6B	CLIPPING SYNC LEVEL
TZJ6.2B	PROT
TZJ6.2B	PROT
SS133	PROT
TZJ6.8C	PROT
TZJ13B	VOLTAGE DETECT
SS133	DECOUPING MUTE AUDIO
SS133	START
P080PKG23	V PULSE OUT
A204K	CURRENT (KV-E2521D ONLY)
SS133	CANAL +BLK LEVEL
SS133	V LIN
P080PKG23	PROT
P080PKG23	PROT
TZJ4.7B	PROT
SS133	PROT (KV-E2921D ONLY)
SS133	PROT (KV-E2921D ONLY)
45B60L-F	AC RECT
GP106PKG23	REF RECT
P080PKG23	SMPS DRIVE 1
P080PKG23	SMPS DRIVE 2
P080PKG23	SMPS DRIVE 3
GP106PKG23	+12V RECT
GP106PKG23	REF RECT
RC25-06S	PLUSE CLIPPER
TZJ33A	FAST ON/OFF
TU-12S	+14V RECT
R029-08J	+135VRECT
TU-12S	+7V RECT
GP15JPKG23	AF V RECT-1
GP15JPKG23	AF V RECT-2
TZJ6.2B	+12V REG
SS133	PROT
TZJ5.6B	+12V REF
TZJ33A	FAST ON/OFF-2
A204K	+12V REF
TZJ33A	FAST ON/OFF-3
SS133	PROT
SS133	DECOUPING STBY
SS133	DECOUPING DTBY
TZJ15A	+12V REF
GP106PKG23	+27V REF
GP106PKG23	+200V REF
GP02-17	G2 REF
P080PKG23	H CENTER-1
P080PKG23	H CENTER-2
RC06-15S	H DAMPER-1
RC06-15S	H DAMPER-2
R029-08J	PIN DAMPER

• WAVEFORMS D BOARD

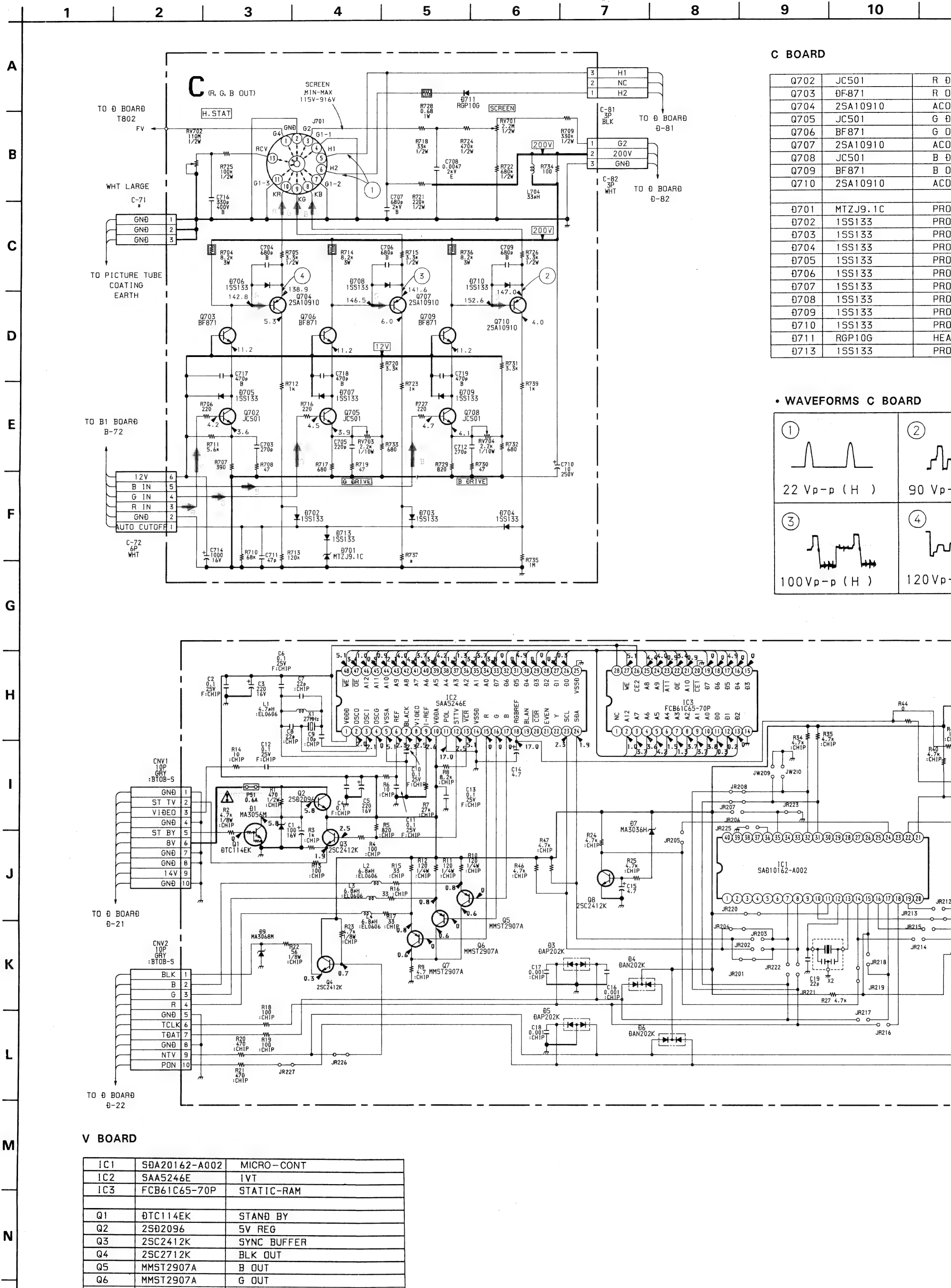
①  1.2Vp-p ( H )	②  4.0Vp-p ( V )	③  4.8Vp-p ( V )
④  4.0Vp-p ( V )	⑤  4.0Vp-p ( H )	⑥  11.0Vp-p ( H )
⑦  14.0Vp-p ( H )	⑧  3.6Vp-p ( H )	⑨  0.1Vp-p (503KHz)
⑩  1.4Vp-p ( H )	⑪  0.7Vp-p ( V )	⑫  2.2Vp-p ( V )
⑬  29.0Vp-p ( V )	⑭  48.0Vp-p ( V )	⑮  3.2Vp-p ( H )
⑯  250Vp-p ( H )	⑰  16.0Vp-p ( H )	⑱  900Vp-p ( H )
⑲  180Vp-p ( H )	⑳  7.0Vp-p ( V )	㉑  48.0Vp-p ( V )
㉒  1.4Vp-p ( H )	㉓  2.8Vp-p (12MHz)	

D BOARD \*MARK

	KV-E2521D	KV-E2921D
C519	0.47MF	0.33MF
C815	1MF	0.82MF
C817	0.015MF	0.017MF
C821	680P 2K	470P 2K
B506	DA204K	-
B514	JW	1SS133
B515	-	1SS133
B-88	-	3P
JW202	-	X
JW203	X	-
JW204	X	-
JW205	-	X
JW206	X	-
JW207	X	-
JW229	X	-
JW216	X	-
L801	-	3.9MMH
R525	1K	-
R561	-	270K
R570	-	680
R607	4.7K	5.6K
R812	68K	51K
R5503	4.7	10
R5506	-	12K

— NOT MOUNTED  
× TO BE MOUNTED



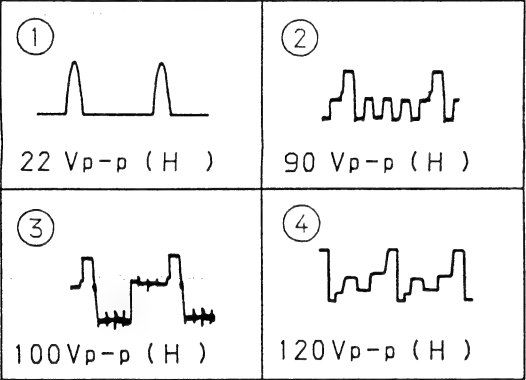




C BOARD

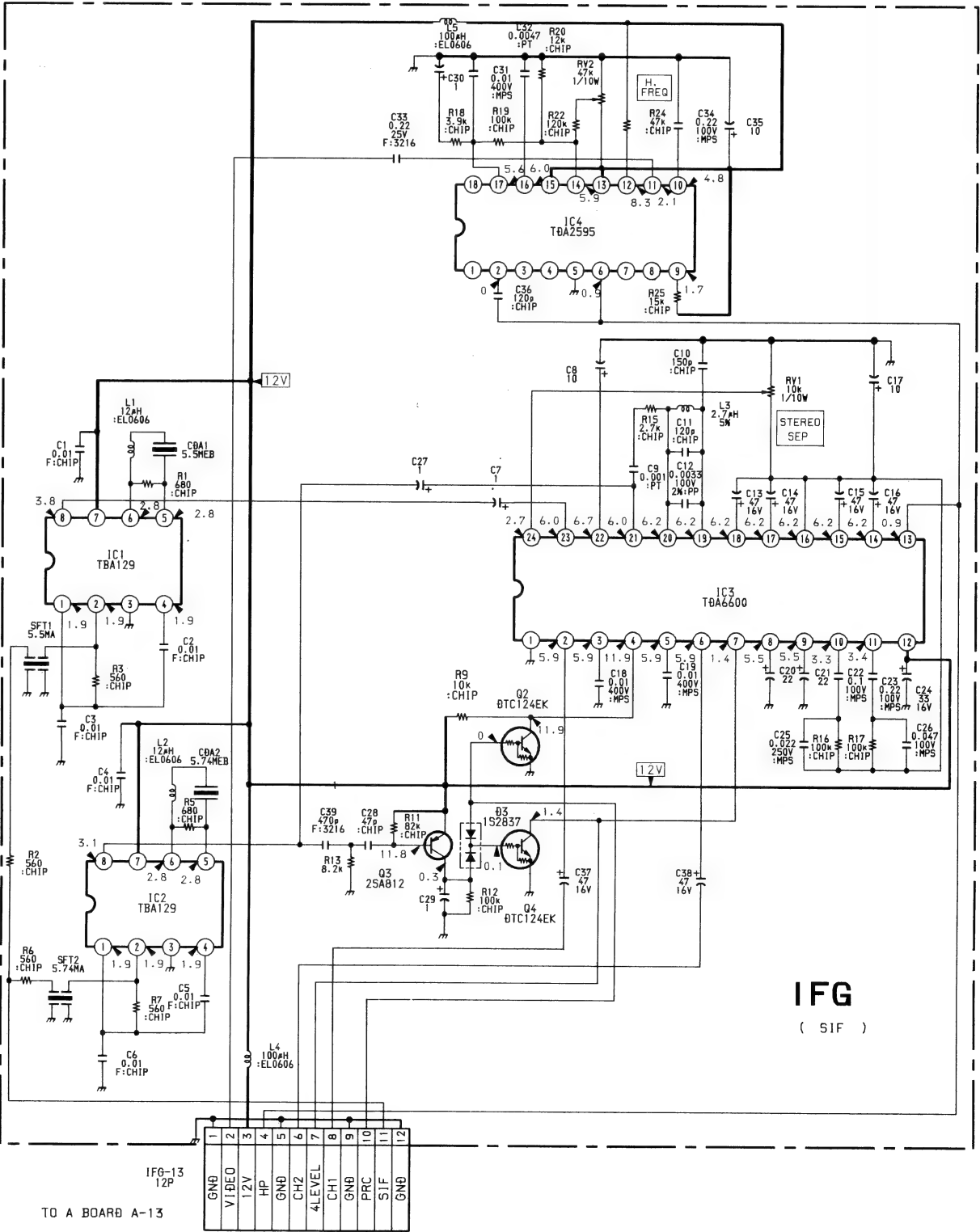
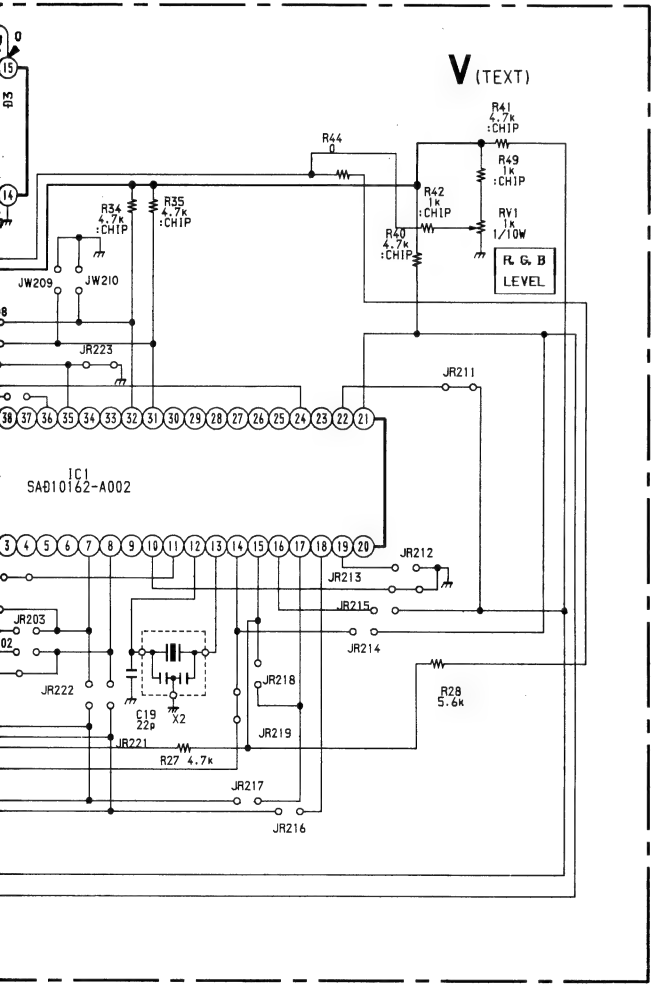
Q702	JC501	R DRIVE
Q703	DF871	R OUT
Q704	2SA10910	ACD MEASURING
Q705	JC501	G DRIVE
Q706	BF871	G OUT
Q707	2SA10910	ACD MEASURING
Q708	JC501	B DRIVE
Q709	BF871	B OUT
Q710	2SA10910	ACD MEASURING
Ø701	MTZJ9.1C	PROTECT
Ø702	1SS133	PROTECT
Ø703	1SS133	PROTECT
Ø704	1SS133	PROTECT
Ø705	1SS133	PROTECT
Ø706	1SS133	PROTECT
Ø707	1SS133	PROTECT
Ø708	1SS133	PROTECT
Ø709	1SS133	PROTECT
Ø710	1SS133	PROTECT
Ø711	RGP10G	HEATING VOLTAGE REC
Ø713	1SS133	PROTECT

• WAVEFORMS C BOARD



C BOARD \*MARK

	KV-E2521Ø	KV-E2921Ø
C-71	2P	3P
R737	820K	470K





C

[R. G. B OUT]

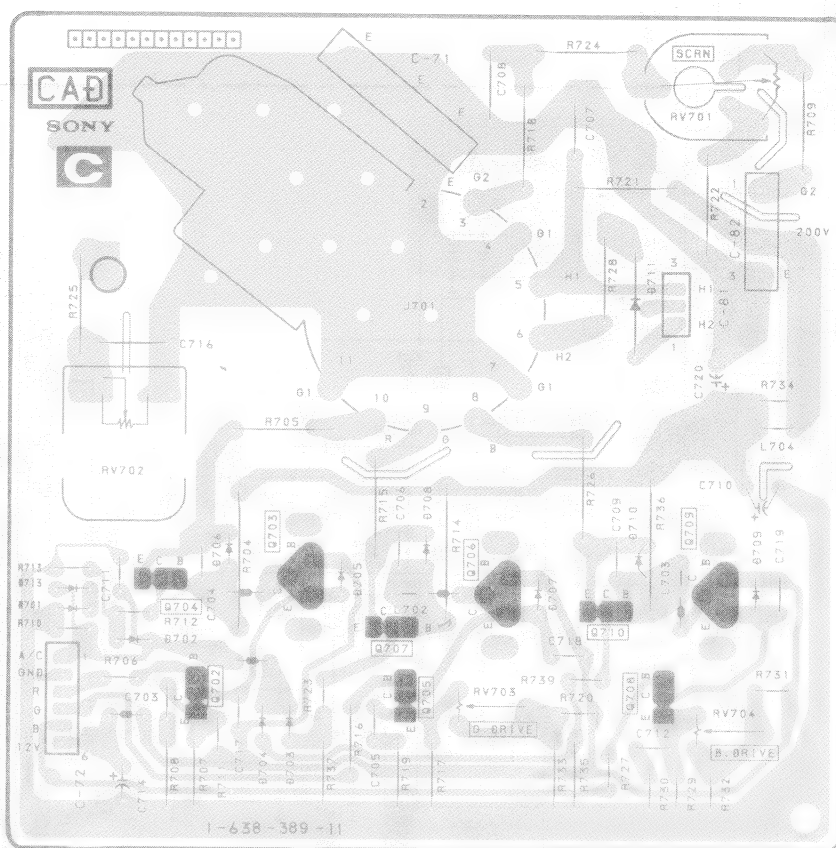
V

[TEXT]

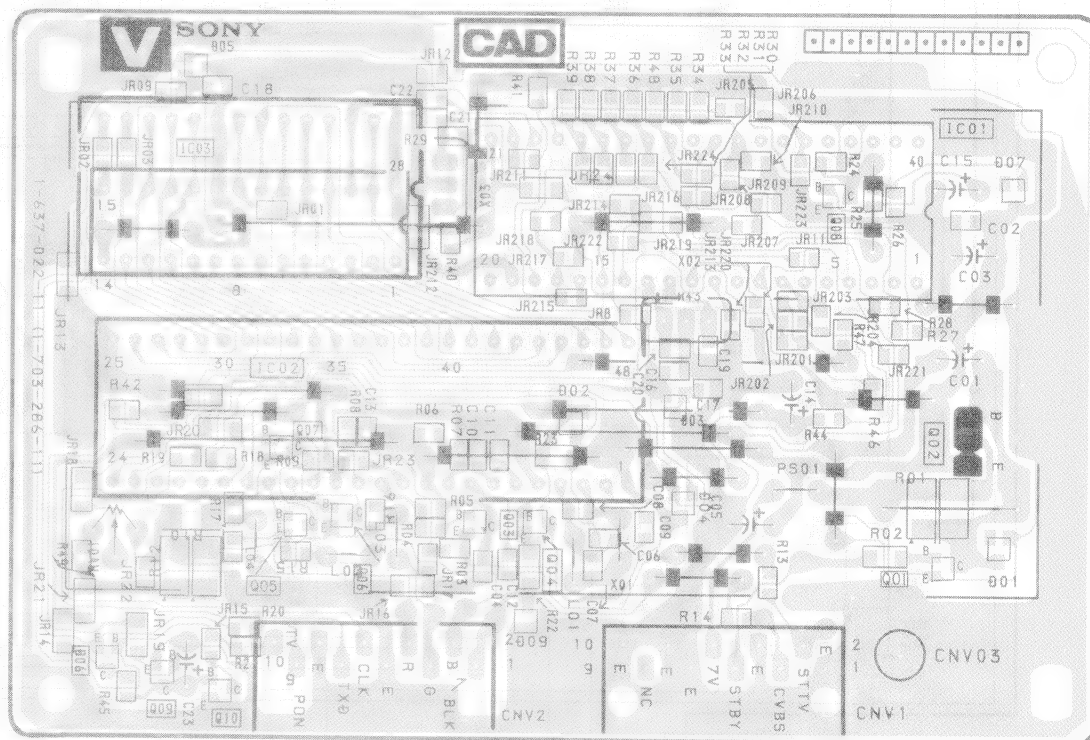
IFG

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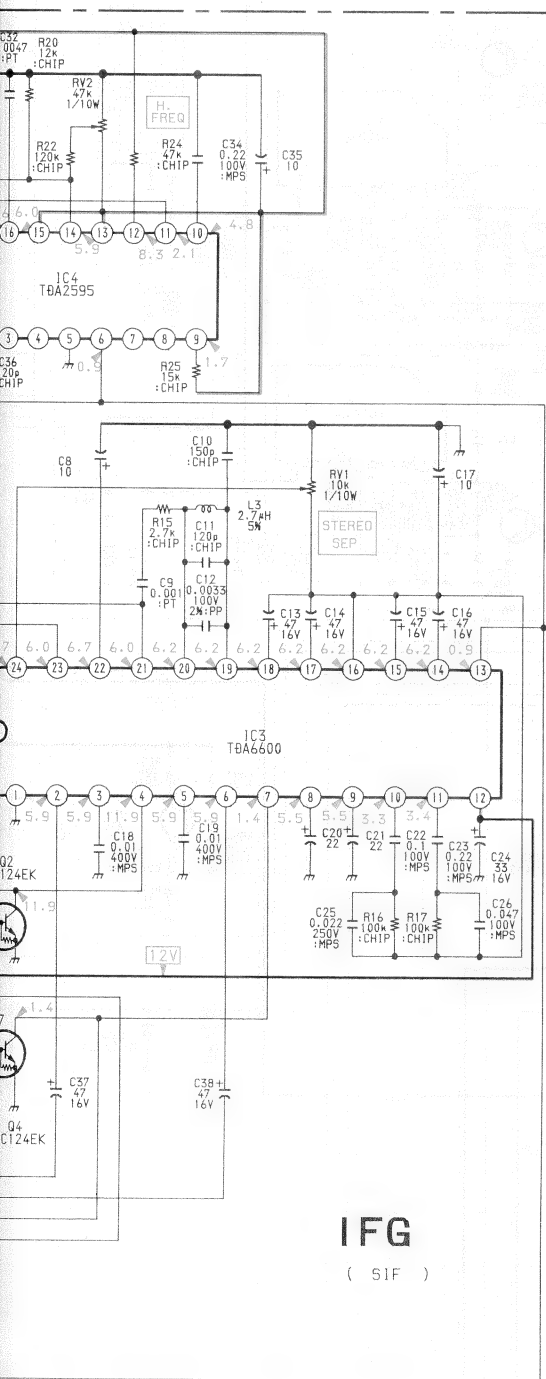
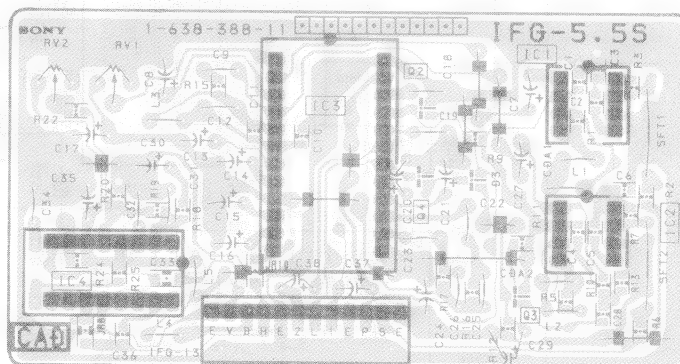
## - C BOARD -



## - V BOARD -



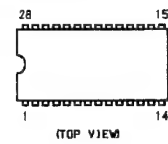
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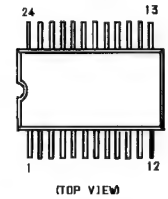


# 5-4. SEMICONDUCTORS

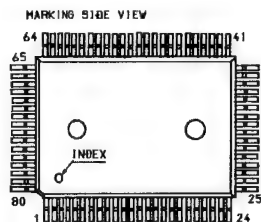
CXA1114P  
SDA20162-A002  
TDA4580-V6  
TDA6200  
TEA2028B



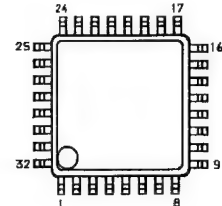
CXD1175AM  
CXD1175M-T5



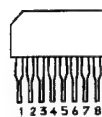
CXD2011Q  
CXK1202Q-T4



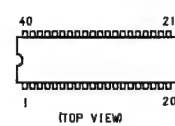
CXK-1202Q



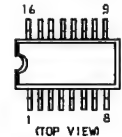
CX20061



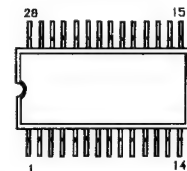
FCB61C65-70P  
SDA20560-AE1C



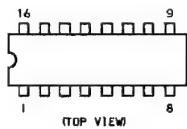
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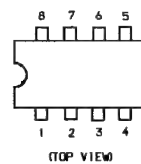
MB40968PF



MC14053BCP  
PCF8574  
TC4051BPHB  
TDA4660T  
TDA8442-N3  
TEA2260  
μPD4053BC



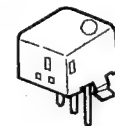
RC4558P  
SDA2546  
TEA2014A  
TEA2031A



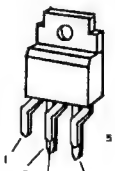
SAA5246E



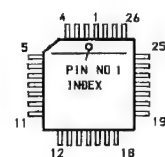
SBX1610-11



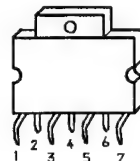
TDA2050



TDA4650WP



TDA8170



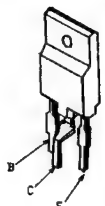
TEA7605  
TYA7812CT  
μPC24M05HF



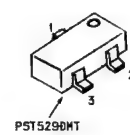
BF871



BU508AS1



DTA144EK  
DTC114EK  
DTC124EK  
DTC144EK  
2SA1162G  
2SB1295-UL6  
2SC2412K  
2SC2412K-QR  
2SC2412K-R



PST5290MT

DTC144ES



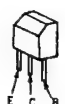
2SA1091-X



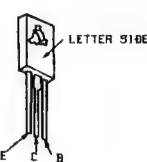
2SA1220A-P  
2SB789-3TZ  
2SB789-34



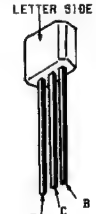
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2SB774-34



2SC2688-LK



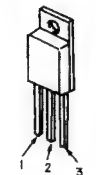
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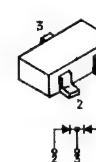
2SD2096-EF



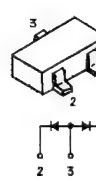
CTU-12S



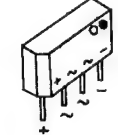
DAN212K  
DAN212K-T146  
MA152WK



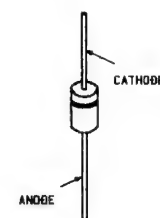
DAP202K  
EGP20G  
1S2836



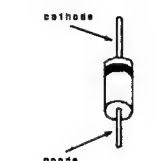
Ø4SB60L-F



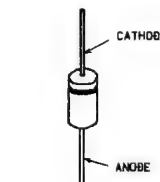
ERC06-15S  
RU-3AM



ERØ29-Ø8J



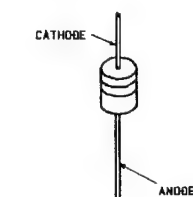
ES1F



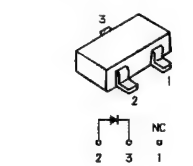
1MN10



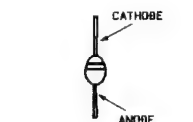
HZS36NB4  
MTZJ-T-77-13B  
MTZJ-T-77-15A  
MTZJ-T-77-33A  
MTZJ-T77-6.2B  
MTZJ-T-77-10C  
MTZJ-13B  
MTZJ-15A  
MTZJ-3.9  
MTZJ-33A  
MTZJ-6.2B  
MTZJN-10C  
RØ5.6ESB2  
RØ6.8ESB2  
RØ7.5ESB2  
RØ9.1ESB3  
VZ4.7BSC  
1SS119



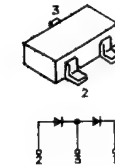
MA3056  
MA3056-H  
MA3110M-TX  
RØ11M-B2  
RØ3.6M-B2  
RØ5.6M-B2  
RØ6.8M-B2



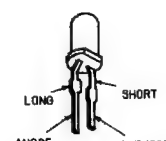
U05G



1SS226



LØ-201VR





SECTION 6  
EXPLODED VIEWS

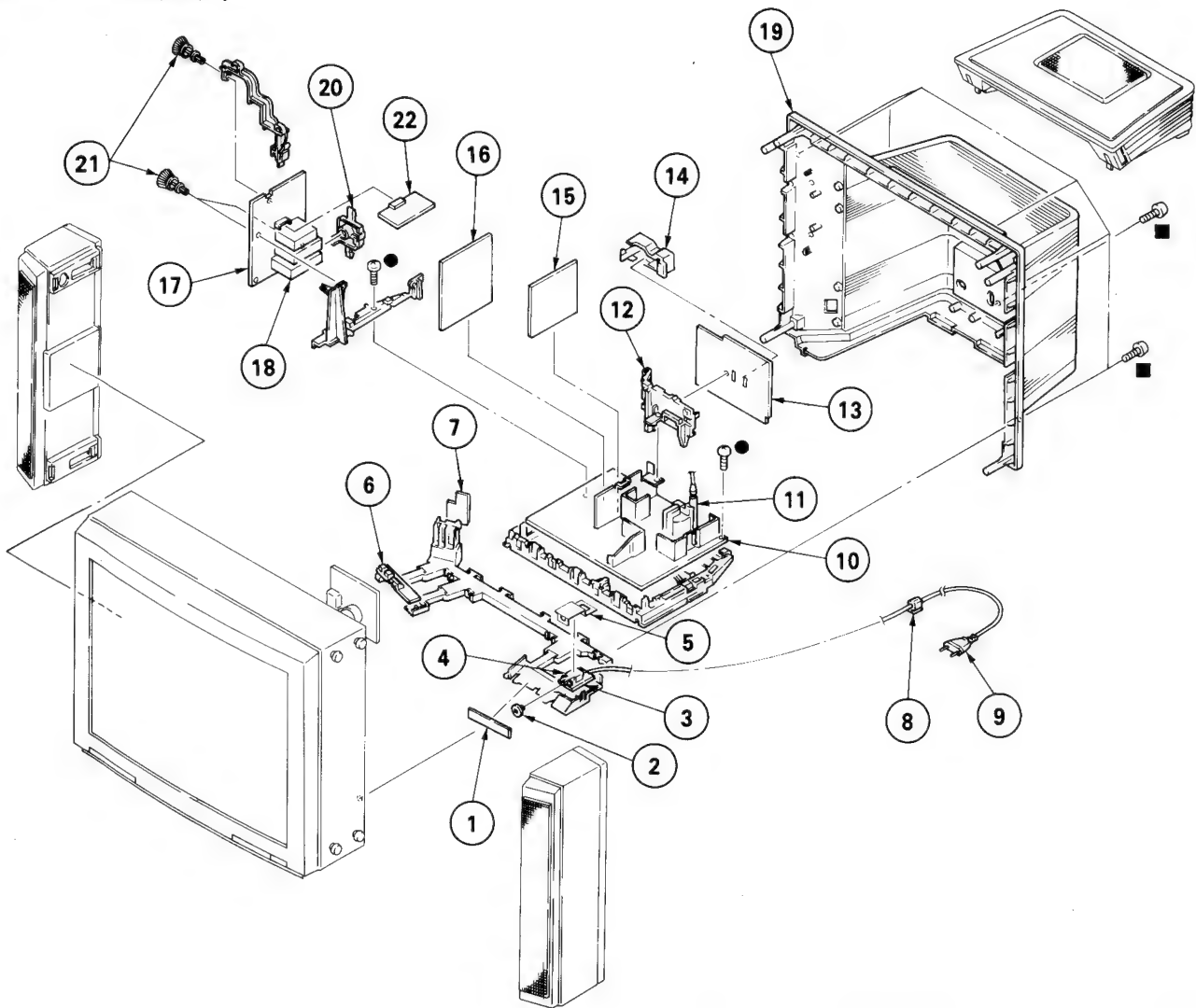
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

(1) CHASSIS

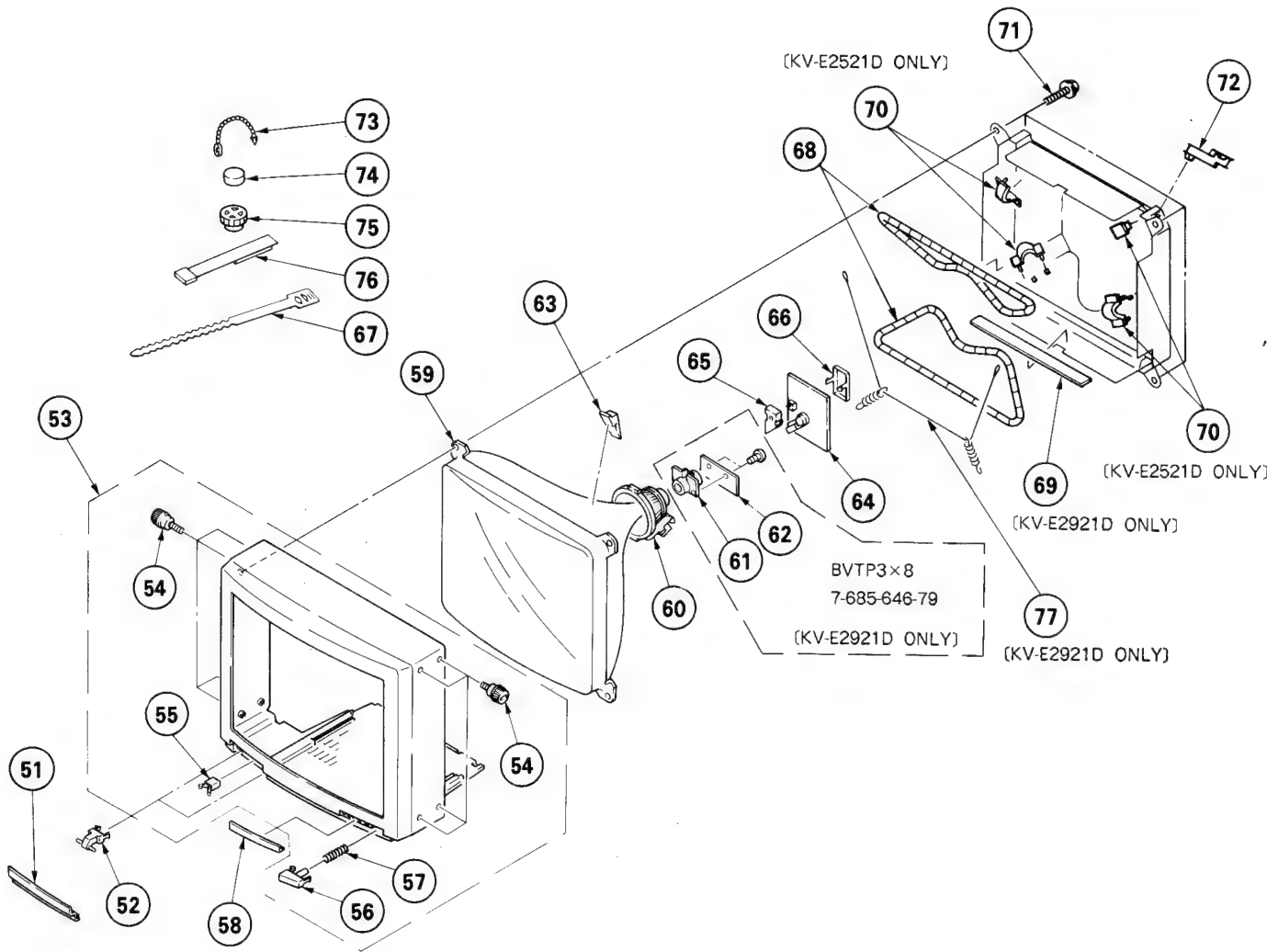
- : BVTP3×12 7-685-648-79
- : BVTP4×16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*1-638-392-11	H2 BOARD		12	*4-386-624-11	BRACKET, J	
2	4-201-011-01	CAP. SWITCH (KV-E2521D ONLY)		13	A-1651-018-A	J1 BOARD, COMPLETE (KV-E2521D ONLY)	
3	4-386-611-01	COVER, SWITCH (KV-E2921D ONLY)		14	A-1651-020-A	J1 BOARD, COMPLETE (KV-E2921D ONLY)	
4	*1-638-390-11	F BOARD		15	4-200-014-01	BRACKET, TERMINAL	
5	$\Delta$ 1-571-433-11	SWITCH, PUSH (AC POWER)		16	A-1645-013-A	V BOARD, COMPLETE	
6	4-200-274-01	COVER, POWER SWITCH		17	A-1621-013-A	B1 BOARD, COMPLETE (KV-E2521D ONLY)	
7	*1-638-391-11	H1 BOARD		18	A-1621-015-A	B1 BOARD, COMPLETE (KV-E2921D ONLY)	
8	*1-638-393-11	J2 BOARD		19	A-1632-022-A	A BOARD, COMPLETE	
9	$\Delta$ 4-389-201-02	HOLDER, AC CORD		20	$\Delta$ 1-465-301-11	TUNER, ET (UV-816(PLL))	
10	$\Delta$ 1-590-501-11	CORD, POWER(WITH NOISE FILTER)		21	4-201-017-02	COVER, REAR (KV-E2521D ONLY)	
11	A-1642-031-A	D BOARD, COMPLETE (KV-E2521D ONLY)		22	4-200-026-04	COVER, REAR (KV-E2921D ONLY)	
	A-1642-032-A	D BOARD, COMPLETE (KV-E2921D ONLY)			*4-386-617-01	HOLDER, TERMINAL	
	$\Delta$ 1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)			4-386-618-01	RIVET, T TYPE	
					A-1654-004-A	IFG BOARD, COMPLETE	

(2) PICTURE TUBE

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

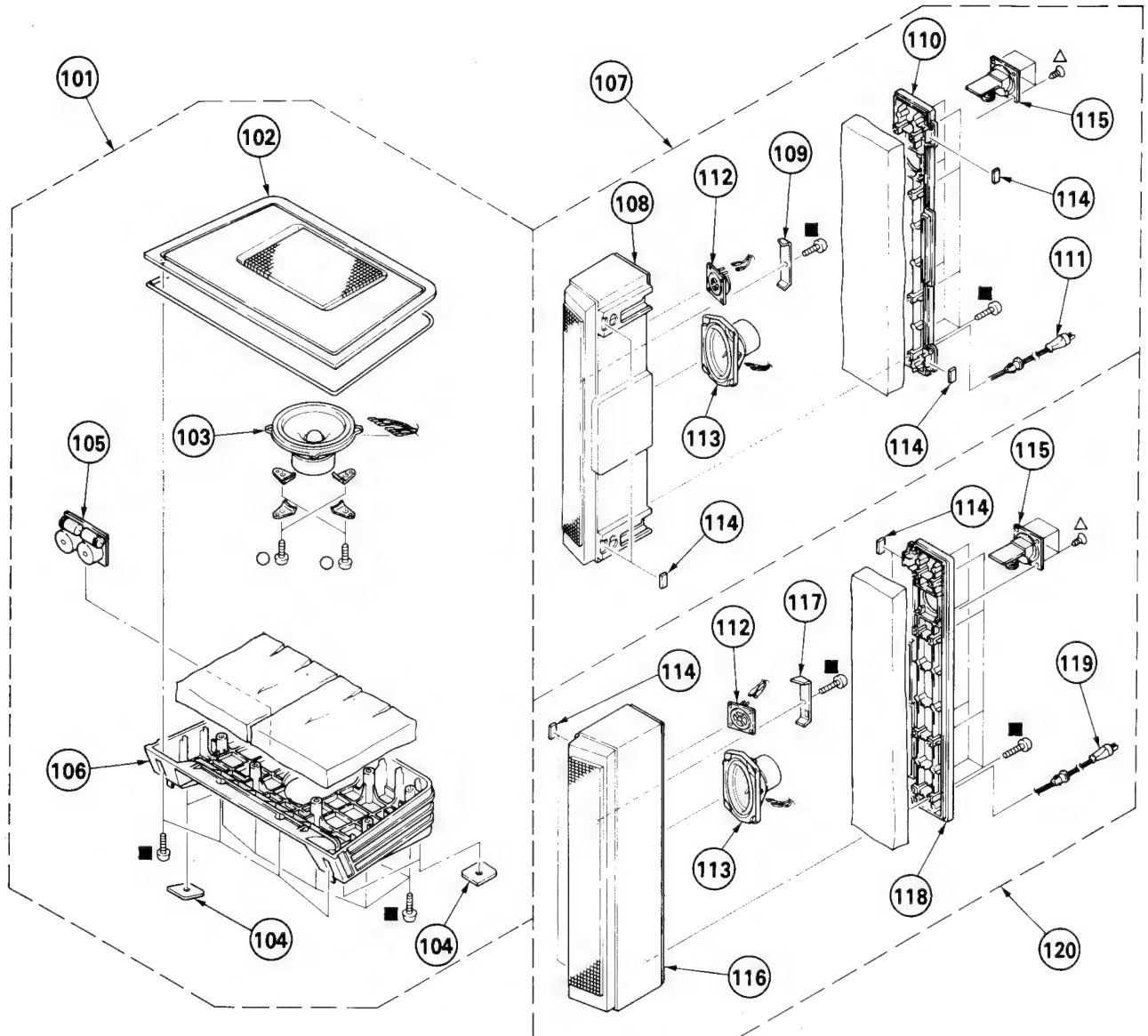


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4201-006-5	DOOR ASSY, CONTROL (KV-E2521D ONLY)		62	*1-634-193-11	VM BOARD (KV-E2921D ONLY)	
52	X-4200-001-5	LID ASSY, CONTROL (KV-E2921D ONLY)		63	3-704-495-01	SPACER, DY	
53	3-703-035-11	SHAFT, LID		64	*A-1638-011-A	C BOARD, COMPLETE (KV-E2521D ONLY)	
	X-4201-005-5	CABINET ASSY (WITH BEZEL ASSY) (KV-E2521D ONLY)	54-57		*A-1638-013-A	C BOARD, COMPLETE (KV-E2921D ONLY)	
	X-4200-008-8	CABINET ASSY (WITH BEZEL ASSY) (KV-E2921D ONLY)	54-57	65	*4-379-167-01	COVER (MAIN), CV	
54	X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL		66	*4-379-160-01	COVER (REAR LID), CV	
55	4-392-036-01	CATCHER, PUSH		67	3-701-007-00	BAND, BINDING	
56	4-200-013-01	BUTTON, POWER		68	$\Delta$ 1-460-091-11	COIL, DEGAUSS (KV-E2521D ONLY)	
57	4-329-112-21	SPRING			$\Delta$ 1-426-398-11	COIL, DEMAGNETIZATION (KV-E2921D ONLY)	
58	4-200-017-02	WINDOW, ORNAMENTAL		69	4-389-291-01	CUSHION (KV-E2921D ONLY)	
59	$\Delta$ 8-733-224-05	PICTURE TUBE (A59JWC60X) (KV-E2521D ONLY)		70	*4-385-916-01	HOLDER (D) (KV-E2521D ONLY)	
	$\Delta$ 8-733-824-05	PICTURE TUBE (A68JYK60X) (KV-E2921D ONLY)		71	4-373-263-01	SCREW (M), PT	
60	$\Delta$ 1-451-311-21	DEFLECTION YOK (Y25FXA) (KV-E2521D ONLY)		72	*4-387-216-01	HOLDER, LEAD	
	$\Delta$ 1-451-313-21	DEFLECTION YOK (Y29FXA) (KV-E2921D ONLY)		73	4-308-870-00	CLIP, LEAD WIRE	
61	$\Delta$ 1-452-509-42	NECK ASSY, PICTURE TUBE (NA-308) (KV-E2921D ONLY)		74	1-452-032-00	MAGNET, DISK; 10MM $\phi$	
				75	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\phi$	
				76	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
				77	4-369-318-00	SPRING, TENSION (KV-E2921D ONLY)	



### (3) SPEAKER

- : BVTP4×16 7-685-663-79  
 ○ : BVTP4×10 7-685-660-79  
 △ : KTP3×12 7-685-248-19



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	*A-1678-001-A	BOX ASSY, WOOFER		102-106	111	CORD, SPEAKER (WITH PLUG)	
102	X-4200-004-2	BOARD ASSY, BAFFLE			112	SPEAKER	
103	1-544-192-11	SPEAKER			113	SPEAKER	
104	4-200-009-01	CUSHION, FOOT			114	CUSHION, FOOT	
105	1-236-549-11	NETWORK, DIVIDING			115	NETWORK, DIVIDING	
106	4-200-027-01	BOX, WOOFER			116	BOX ASSY (RIGHT), SIDE (KV-E2521D ONLY)	
107	*A-1678-012-A	BOX ASSY (LEFT), SPEAKER			X-4200-005-1	BOX ASSY (R), SIDE (KV-E2921D ONLY)	
		(KV-E2521D ONLY)		108-115	117	*4-200-004-02	BRACKET (R), SPEAKER
	*A-1678-005-A	BOX ASSY (LEFT), SPEAKER		108-115	118	4-201-006-01	PANEL (RIGHT), REAR (KV-E2521D ONLY)
		(KV-E2921D ONLY)			4-200-029-01	PANEL (R), REAR (KV-E2921D ONLY)	
108	X-4201-003-1	BOX ASSY (LEFT), SIDE (KV-E2521D ONLY)		119	1-575-024-11	CORD, SPEAKER (WITH PLUG)	
	X-4200-006-1	BOX ASSY (L), SIDE (KV-E2521D ONLY)		120	*A-1678-010-A	BOX ASSY (RIGHT), SPEAKER	112-119
109	*4-200-003-02	BRACKET (L), SPEAKER				(KV-E2521D ONLY)	
110	4-201-007-01	PANEL (LEFT), REAR (KV-E2521D ONLY)			*A-1678-003-A	BOX ASSY (RIGHT), SPEAKER	112-119
	4-200-030-01	PANEL (L), REAR (KV-E2921D ONLY)				(KV-E2921D ONLY)	



**B1**

# SECTION 7 ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark **△** are critical for safety.  
Replace only with part number specified.

• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

CAPACITORS

• MF :  $\mu$ F, PF :  $\mu$ F

COILS

• MMH : mH, UH :  $\mu$ H

RESISTORS

• All resistors are in ohms  
• F : nonflammable

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
A-1621-013-A	B1 BOARD, COMPLETE (KV-E2521D ONLY)	*****		C344	1-124-791-11	ELECT 1MF	20% 50V
A-1621-015-A	B1 BOARD, COMPLETE (KV-E2921D ONLY)	*****		C345	1-137-094-11	FILM 0.047MF	10% 100V
*1-565-393-11	CONNECTOR, BOARD TO BOARD			C346	1-137-033-11	FILM 0.33MF	10% 100V
*1-568-878-51	PIN, CONNECTOR 3P (KV-E2921D ONLY)			C347	1-137-098-11	FILM 0.1MF	10% 100V
*1-568-881-51	PIN, CONNECTOR 6P			C348	1-137-102-11	FILM 0.022MF	10% 250V
<CAPACITOR>				C349	1-137-102-11	FILM 0.022MF	10% 250V
C301	1-137-031-11	FILM 0.22MF	10% 100V	C350	1-124-902-00	ELECT 0.47MF	20% 50V
C302	1-137-031-11	FILM 0.22MF	10% 100V	C351	1-137-102-11	FILM 0.022MF	10% 250V
C303	1-124-122-11	ELECT 100MF	20% 50V	C352	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C304	1-137-031-11	FILM 0.22MF	10% 100V	C353	1-126-101-11	ELECT 100MF	20% 16V
C305	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C354	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C306	1-124-902-00	ELECT 0.47MF	20% 50V	C355	1-126-101-11	ELECT 100MF	20% 16V
C307	1-124-902-00	ELECT 0.47MF	20% 50V	C357	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C308	1-124-902-00	ELECT 0.47MF	20% 50V	C358	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C309	1-124-902-00	ELECT 0.47MF	20% 50V	C360	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C310	1-137-098-11	FILM 0.1MF	10% 100V	C361	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C311	1-137-098-11	FILM 0.1MF	10% 100V	C363	1-163-033-00	CERAMIC CHIP 0.022MF	50V
C312	1-124-902-00	ELECT 0.47MF	20% 50V	C371	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C313	1-124-902-00	ELECT 0.47MF	20% 50V	C372	1-124-477-11	ELECT 47MF	20% 16V
C314	1-124-902-00	ELECT 0.47MF	20% 50V	C373	1-124-477-11	ELECT 47MF	20% 16V
C315	1-124-791-11	ELECT 1MF	20% 50V	C374	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C316	1-124-927-11	ELECT 4.7MF	20% 50V	C375	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C317	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C376	1-124-034-51	ELECT 33MF	20% 16V
C318	1-124-927-11	ELECT 4.7MF	20% 50V	C377	1-124-119-00	ELECT 330MF	20% 16V
C319	1-124-927-11	ELECT 4.7MF	20% 50V	C378	1-124-034-51	ELECT 33MF	20% 16V
C320	1-124-910-11	ELECT 47MF	20% 50V	C379	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C321	1-137-027-11	FILM 0.82MF	10% 63V	C380	1-163-090-00	CERAMIC CHIP 7PF	0.25PF 50V
C322	1-163-077-00	CERAMIC CHIP 0.1MF	50V	C381	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C323	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C382	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C324	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C383	1-163-197-00	CERAMIC CHIP 470PF	5% 50V
C325	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C384	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C326	1-124-910-11	ELECT 47MF	20% 50V	C385	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C327	1-124-910-11	ELECT 47MF	20% 50V	C386	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C328	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C387	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C329	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C388	1-164-232-11	CERAMIC CHIP 0.01MF	50V
C330	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C389	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C331	1-137-098-11	FILM 0.1MF	10% 100V	C390	1-123-875-11	ELECT 10MF	20% 50V
C332	1-137-098-11	FILM 0.1MF	10% 100V	C391	1-123-875-11	ELECT 10MF	20% 50V
C333	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C392	1-123-875-11	ELECT 10MF	20% 50V
C335	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C393	1-126-101-11	ELECT 100MF	20% 16V
C337	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C394	1-126-101-11	ELECT 100MF	20% 16V
C338	1-137-102-11	FILM 0.022MF	10% 250V	C395	1-126-101-11	ELECT 100MF	20% 16V
C339	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C396	1-126-101-11	ELECT 100MF	20% 16V
C340	1-126-103-11	ELECT 470MF	20% 16V	C397	1-124-791-11	ELECT 1MF	20% 50V
C341	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C398	1-123-875-11	ELECT 10MF	20% 50V
C342	1-124-791-11	ELECT 1MF	20% 50V	C399	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C343	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C1301	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
				C1302	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
				C1303	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C1304	1-123-875-11	ELECT 10MF	20% 50V
				C1305	1-126-101-11	ELECT 100MF	20% 16V



**B1**

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q329	8-729-216-22	TRANSISTOR 2SA1162-G		R312	1-216-019-00	METAL GLAZE 56 5% 1/10W	
Q330	8-729-901-78	TRANSISTOR 2SC2412K-R		R313	1-216-019-00	METAL GLAZE 56 5% 1/10W	
Q331	8-729-216-22	TRANSISTOR 2SA1162-G		R314	1-216-019-00	METAL GLAZE 56 5% 1/10W	
Q332	8-729-216-22	TRANSISTOR 2SA1162-G		R315	1-216-023-00	METAL GLAZE 82 5% 1/10W	
Q333	8-729-901-00	TRANSISTOR DTC124EK		R316	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
Q334	8-729-901-00	TRANSISTOR DTC124EK		R317	1-216-033-00	METAL GLAZE 220 5% 1/10W	
Q335	8-729-901-78	TRANSISTOR 2SC2412K-R		R318	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q336	8-729-901-78	TRANSISTOR 2SC2412K-R		R319	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q337	8-729-901-78	TRANSISTOR 2SC2412K-R		R320	1-216-198-00	METAL GLAZE 1K 5% 1/8W	
Q338	8-729-216-22	TRANSISTOR 2SA1162-G		R321	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q339	8-729-901-78	TRANSISTOR 2SC2412K-R		R322	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q340	8-729-901-78	TRANSISTOR 2SC2412K-R		R323	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q341	8-729-901-78	TRANSISTOR 2SC2412K-R		R324	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q342	8-729-901-78	TRANSISTOR 2SC2412K-R		R325	1-216-033-00	METAL GLAZE 220 5% 1/10W	
Q343	8-729-901-78	TRANSISTOR 2SC2412K-R		R326	1-216-009-00	METAL GLAZE 22 5% 1/10W	
Q344	8-729-901-78	TRANSISTOR 2SC2412K-R		R327	1-216-009-00	METAL GLAZE 22 5% 1/10W	
Q345	8-729-901-78	TRANSISTOR 2SC2412K-R		R328	1-216-009-00	METAL GLAZE 22 5% 1/10W	
Q346	8-729-901-78	TRANSISTOR 2SC2412K-R		R329	1-216-031-00	METAL GLAZE 180 5% 1/10W	
Q347	8-729-901-78	TRANSISTOR 2SC2412K-R		R330	1-216-031-00	METAL GLAZE 180 5% 1/10W	
Q348	8-729-901-00	TRANSISTOR DTC124EK		R331	1-216-031-00	METAL GLAZE 180 5% 1/10W	
Q350	8-729-901-78	TRANSISTOR 2SC2412K-R		R332	1-216-182-00	METAL GLAZE 220 5% 1/8W	
Q352	8-729-216-22	TRANSISTOR 2SA1162-G		R333	1-216-033-00	METAL GLAZE 220 5% 1/10W	
Q353	8-729-901-78	TRANSISTOR 2SC2412K-R		R335	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
Q354	8-729-901-78	TRANSISTOR 2SC2412K-R		R336	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q355	8-729-901-78	TRANSISTOR 2SC2412K-R		R337	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
Q356	8-729-216-22	TRANSISTOR 2SA1162-G		R338	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
Q357	8-729-216-22	TRANSISTOR 2SA1162-G		R339	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
Q358	8-729-901-78	TRANSISTOR 2SC2412K-R		R340	1-216-103-00	METAL GLAZE 180K 5% 1/10W	
Q359	8-729-216-22	TRANSISTOR 2SA1162-G		R341	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
Q360	8-729-901-78	TRANSISTOR 2SC2412K-R		R342	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
Q361	8-729-901-78	TRANSISTOR 2SC2412K-R		R343	1-216-043-00	METAL GLAZE 560 5% 1/10W	(KV-E2521D ONLY)
Q362	8-729-901-78	TRANSISTOR 2SC2412K-R			1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	(KV-E2921D ONLY)
Q363	8-729-901-78	TRANSISTOR 2SC2412K-R		R344	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
Q364	8-729-216-22	TRANSISTOR 2SA1162-G		R345	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
Q365	8-729-216-22	TRANSISTOR 2SA1162-G		R346	1-216-033-00	METAL GLAZE 220 5% 1/10W	
Q366	8-729-901-78	TRANSISTOR 2SC2412K-R		R347	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
Q367	8-729-901-78	TRANSISTOR 2SC2412K-R		R348	1-216-001-00	METAL GLAZE 10 5% 1/10W	
Q368	8-729-901-78	TRANSISTOR 2SC2412K-R		R349	1-216-001-00	METAL GLAZE 10 5% 1/10W	
Q369	8-729-901-78	TRANSISTOR 2SC2412K-R		R350	1-216-184-00	METAL GLAZE 270 5% 1/8W	
Q370	8-729-901-78	TRANSISTOR 2SC2412K-R		R351	1-216-184-00	METAL GLAZE 270 5% 1/8W	
Q371	8-729-901-78	TRANSISTOR 2SC2412K-R		R352	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
Q372	8-729-901-78	TRANSISTOR 2SC2412K-R		R353	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
Q373	8-729-901-00	TRANSISTOR DTC124EK		R354	1-216-037-00	METAL GLAZE 330 5% 1/10W	
Q1301	8-729-901-00	TRANSISTOR DTC124EK		R355	1-216-033-00	METAL GLAZE 220 5% 1/10W	
Q1302	8-729-901-78	TRANSISTOR 2SC2412K-R		R356	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
Q1303	8-729-901-00	TRANSISTOR DTC124EK		R357	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
				R358	1-216-037-00	METAL GLAZE 330 5% 1/10W	
				R359	1-216-041-00	METAL GLAZE 470 5% 1/10W	
				R361	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
				R362	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
				R363	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
				R364	1-216-033-00	METAL GLAZE 220 5% 1/10W	
				R365	1-216-035-00	METAL GLAZE 270 5% 1/10W	
				R366	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
				R367	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
				R368	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
				R369	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
				R370	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
				R371	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R372	1-216-033-00	METAL GLAZE 220 5% 1/10W	
				R373	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
<RESISTOR>							
JR302	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR304	1-216-296-00	METAL GLAZE 0 5% 1/8W					
JR305	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR390	1-216-295-00	METAL GLAZE 0 5% 1/10W					
JR391	1-216-295-00	METAL GLAZE 0 5% 1/10W					
R301	1-216-033-00	METAL GLAZE 220 5% 1/10W					
R302	1-216-033-00	METAL GLAZE 220 5% 1/10W					
R303	1-216-033-00	METAL GLAZE 220 5% 1/10W					
R304	1-216-081-00	METAL GLAZE 22K 5% 1/10W					
R305	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R306	1-216-035-00	METAL GLAZE 270 5% 1/10W					
R307	1-216-097-00	METAL GLAZE 100K 5% 1/10W					
R309	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R310	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R311	1-216-025-00	METAL GLAZE 100 5% 1/10W					



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R374	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1339	1-216-039-00	METAL GLAZE	390 5% 1/10W
R375	1-216-043-00	METAL GLAZE	560 5% 1/10W	R1340	1-216-025-00	METAL GLAZE	100 5% 1/10W
R376	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1341	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R377	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1342	1-216-025-00	METAL GLAZE	100 5% 1/10W
R378	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1343	1-216-043-00	METAL GLAZE	560 5% 1/10W
R379	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1344	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R380	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1345	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R381	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1346	1-216-025-00	METAL GLAZE	100 5% 1/10W
R382	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R1347	1-216-025-00	METAL GLAZE	100 5% 1/10W
R383	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1348	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R384	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R1349	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R385	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1350	1-216-039-00	METAL GLAZE	390 5% 1/10W
R386	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R1351	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R387	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1352	1-216-041-00	METAL GLAZE	470 5% 1/10W
R388	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1353	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R389	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1354	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R390	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1355	1-216-045-00	METAL GLAZE	680 5% 1/10W
R391	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1356	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R392	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1357	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R393	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1358	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R394	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1359	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R395	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1360	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R396	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1361	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R397	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1362	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R398	1-216-035-00	METAL GLAZE	270 5% 1/10W	R1363	1-216-039-00	METAL GLAZE	390 5% 1/10W
R399	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R1364	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R403	1-216-035-00	METAL GLAZE	270 5% 1/10W	R1365	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R1301	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1366	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R1302	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1367	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R1303	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1368	1-216-033-00	METAL GLAZE	220 5% 1/10W
R1305	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R1369	1-216-031-00	METAL GLAZE	180 5% 1/10W
R1308	1-216-295-00	METAL GLAZE	0 5% 1/10W	R1370	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R1371	1-216-031-00	METAL GLAZE	180 5% 1/10W
			(KV-E2521D ONLY)	R1372	1-216-047-00	METAL GLAZE	820 5% 1/10W
			(KV-E2921D ONLY)	R1373	1-216-035-00	METAL GLAZE	270 5% 1/10W
R1309	1-216-023-00	METAL GLAZE	82 5% 1/10W	R1374	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W
R1310	1-216-047-00	METAL GLAZE	820 5% 1/10W	R1375	1-216-208-00	METAL GLAZE	2.7K 5% 1/8W
R1311	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1376	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R1312	1-216-045-00	METAL GLAZE	680 5% 1/10W	R1377	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R1313	1-216-043-00	METAL GLAZE	560 5% 1/10W	R1378	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R1314	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R1379	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R1315	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1380	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R1316	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1381	1-216-033-00	METAL GLAZE	220 5% 1/10W
R1319	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1382	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R1320	1-216-641-11	METAL CHIP	390 0.50% 1/10W	R1383	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R1321	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1384	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R1322	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R1385	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R1323	1-216-643-11	METAL CHIP	470 0.50% 1/10W	R1386	1-216-047-00	METAL GLAZE	820 5% 1/10W
R1324	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1387	1-216-031-00	METAL GLAZE	180 5% 1/10W
R1325	1-216-037-00	METAL GLAZE	330 5% 1/10W	R1388	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1326	1-216-045-00	METAL GLAZE	680 5% 1/10W	R1389	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1327	1-216-029-00	METAL GLAZE	150 5% 1/10W	R1390	1-216-093-00	METAL GLAZE	68K 5% 1/10W
R1328	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1391	1-216-208-00	METAL GLAZE	2.7K 5% 1/8W
R1329	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1392	1-216-047-00	METAL GLAZE	820 5% 1/10W
R1330	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1393	1-216-047-00	METAL GLAZE	820 5% 1/10W
R1331	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1394	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1332	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1395	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1333	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1396	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1334	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R1397	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1335	1-216-043-00	METAL GLAZE	560 5% 1/10W	R1398	1-216-001-00	METAL GLAZE	10 5% 1/10W
R1336	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1399	1-216-029-00	METAL GLAZE	150 5% 1/10W
R1337	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W				
R1338	1-216-085-00	METAL GLAZE	33K 5% 1/10W				



# B1 F A C

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<VARIABLE RESISTOR>				<TRANSISTOR>			
RV301	1-238-012-11	RES, ADJ, CARBON 1K		Q113	8-729-901-78	TRANSISTOR 2SC2412K-R	
<CRYSTAL>				Q114	8-729-901-78	TRANSISTOR 2SC2412K-R	
X301	1-567-307-11	OSCILLATOR, CRYSTAL		Q115	8-729-901-78	TRANSISTOR 2SC2412K-R	
X302	1-567-131-00	OSCILLATOR, CRYSTAL		Q116	8-729-901-78	TRANSISTOR 2SC2412K-R	
*****				Q125	8-729-900-89	TRANSISTOR DTC144ES	
*1-638-390-11	F BOARD			Q126	8-729-901-06	TRANSISTOR DTA144EK	
*****				Q181	8-729-901-78	TRANSISTOR 2SC2412K-R	
*1-580-690-11	PIN, CONNECTOR (PC BOARD) 4P			<RESISTOR>			
*4-341-752-01	EYELET			JR230	1-216-295-00	METAL GLAZE 0 5% 1/10W	
<FUSE>				JR252	1-216-296-00	METAL GLAZE 0 5% 1/8W	
F1601 $\Delta$	1-532-504-31	FUSE 4A/250V		JR253	1-216-296-00	METAL GLAZE 0 5% 1/8W	
	1-533-230-11	HOLDER, FUSE; F1601		JR255	1-216-296-00	METAL GLAZE 0 5% 1/8W	
<SWITCH>				JR256	1-216-296-00	METAL GLAZE 0 5% 1/8W	
S1701 $\Delta$	1-571-433-11	SWITCH, PUSH (AC POWER)		JR257	1-216-296-00	METAL GLAZE 0 5% 1/8W	
*****				JR258	1-216-296-00	METAL GLAZE 0 5% 1/8W	
A-1632-022-A	A BOARD, COMPLETE			R101	1-216-025-00	METAL GLAZE 100 5% 1/10W	
*****				R105	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)			R107	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
*1-564-881-11	PLUG, CONNECTOR 4P			R108	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
*1-564-886-11	PLUG, CONNECTOR 9P			R110	1-249-429-11	CARBON 10K 5% 1/4W	
*1-565-393-11	CONNECTOR, BOARD TO BOARD			R111	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
*1-565-503-11	CONNECTOR, BOARD TO BOARD 12P			R116	1-216-023-00	METAL GLAZE 82 5% 1/10W	
<CAPACITOR>				R118	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
C101	1-126-233-11	ELECT 22MF 20% 50V		R128	1-216-027-00	METAL GLAZE 120 5% 1/10W	
C102	1-126-103-11	ELECT 470MF 20% 16V		R129	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
C104	1-124-910-11	ELECT 47MF 20% 50V		R130	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
C106	1-126-233-11	ELECT 22MF 20% 50V		R157	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C108	1-136-165-00	FILM 0.1MF 5% 50V		R158	1-249-409-11	CARBON 220 5% 1/4W	
C109	1-163-133-00	CERAMIC CHIP 470PF 5% 50V		R159	1-249-409-11	CARBON 220 5% 1/4W	
C111	1-124-925-11	ELECT 2.2MF 20% 50V		R161	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
C115	1-124-925-11	ELECT 2.2MF 20% 50V		R162	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
C127	1-124-122-11	ELECT 100MF 20% 50V		R163	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
C128	1-124-910-11	ELECT 47MF 20% 50V		R164	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
C129	1-124-910-11	ELECT 47MF 20% 50V		R165	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
C138	1-136-165-00	FILM 0.1MF 5% 50V		R167	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
C171	1-163-005-11	CERAMIC CHIP 470PF 10% 50V		R168	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
C172	1-163-005-11	CERAMIC CHIP 470PF 10% 50V		R169	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
C177	1-102-074-00	CERAMIC 0.001MF 10% 50V		R181	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C181	1-101-004-00	CERAMIC 0.01MF 50V		R182	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
<IC>				R193	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
IC103	8-759-979-62	IC PCF8574		R194	1-216-017-00	METAL GLAZE 47 5% 1/10W	
<COIL>				R195	1-216-017-00	METAL GLAZE 47 5% 1/10W	
L100	1-410-683-31	INDUCTOR 560UH		R196	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
L101	1-408-225-00	INDUCTOR 3.3UH		<TUNER>			
L102	1-408-413-00	INDUCTOR 22UH		TU101 $\Delta$	1-465-301-11	TUNER, ET (UV-816(PLL))	
L107	1-408-397-00	INDUCTOR 1UH		<IF BLOCK>			
*****				VIF101	1-466-154-21	IF BLOCK (IFG-389S)	
*****				*****			
*****				*A-1638-011-A	C BOARD, COMPLETE (KV-E2521D ONLY)		
*****				*****			
*****				*A-1638-013-A	C BOARD, COMPLETE (KV-E2921D ONLY)		
*****				*****			
*****				*1-506-371-00	PIN, CONNECTOR 2P		
*****				*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		
*****				*1-568-878-51	PIN, CONNECTOR 3P		



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*1-568-881-51	PIN, CONNECTOR 6P			R709	1-202-844-00	SOLID 330K 10%	1/2W
*4-379-160-01	COVER (REAR LID), CV			R710	1-215-465-00	METAL 68K 1%	1/6W
*4-379-167-01	COVER (MAIN), CV			R711	1-249-426-11	CARBON 5.6K 5%	1/4W
				R712	1-249-417-11	CARBON 1K 5%	1/4W
				R713	1-215-471-00	METAL 120K 1%	1/6W
<CAPACITOR>				R714	1-216-486-00	METAL OXIDE 8.2K 5%	3W F
C703	1-102-980-00	CERAMIC 270PF 5%	50V	R715	1-202-824-00	SOLID 3.3K 10%	1/2W
C704	1-102-116-00	CERAMIC 680PF 10%	50V	R716	1-249-409-11	CARBON 220 5%	1/4W
C705	1-102-978-00	CERAMIC 220PF 5%	50V	R717	1-249-415-11	CARBON 680 5%	1/4W
C706	1-102-116-00	CERAMIC 680PF 10%	50V	R718	1-202-814-11	SOLID 33K 10%	1/2W
C707	1-162-116-00	CERAMIC 680PF 10%	2KV	R719	1-249-401-11	CARBON 47 5%	1/4W
C708	1-162-114-00	CERAMIC 0.0047MF 20%	2KV	R720	1-249-423-11	CARBON 3.3K 5%	1/4W
C709	1-102-116-00	CERAMIC 680PF 10%	50V	R721	1-202-842-11	SOLID 220K 10%	1/2W
C710	1-123-947-00	ELECT 10MF 20%	250V	R722	1-202-848-00	SOLID 680K 10%	1/2W
C711	1-101-880-00	CERAMIC 47PF 5%	50V	R723	1-249-417-11	CARBON 1K 5%	1/4W
C712	1-102-980-00	CERAMIC 270PF 5%	50V	R724	1-202-846-00	SOLID 470K 10%	1/2W
C714	1-124-360-00	ELECT 1000MF 20%	16V	R725	1-202-838-00	SOLID 100K 10%	1/2W
C716	1-162-622-11	CERAMIC 330PF 10%	400V	R726	1-202-824-00	SOLID 3.3K 10%	1/2W
C717	1-102-114-00	CERAMIC 470PF 10%	50V	R727	1-249-409-11	CARBON 220 5%	1/4W
C718	1-102-114-00	CERAMIC 470PF 10%	50V	R728	1-216-347-11	METAL OXIDE 0.68 5%	1W F
C719	1-102-114-00	CERAMIC 470PF 10%	50V	R729	1-249-416-11	CARBON 820 5%	1/4W
<DIODE>				R730	1-249-401-11	CARBON 47 5%	1/4W
D701	8-719-110-14	DIODE RD9.1ES-B3		R731	1-249-423-11	CARBON 3.3K 5%	1/4W
D702	8-719-911-19	DIODE 1SS119		R732	1-249-415-11	CARBON 680 5%	1/4W
D703	8-719-911-19	DIODE 1SS119		R733	1-249-415-11	CARBON 680 5%	1/4W
D704	8-719-911-19	DIODE 1SS119		R734	1-249-405-11	CARBON 100 5%	1/4W
D705	8-719-911-19	DIODE 1SS119		R735	1-215-493-00	METAL 1M 1%	1/6W
D706	8-719-911-19	DIODE 1SS119		R736	1-216-486-00	METAL OXIDE 8.2K 5%	3W F
D707	8-719-911-19	DIODE 1SS119		R737	1-215-491-00	METAL 820K 1%	1/6W (KV-E2521D ONLY)
D708	8-719-911-19	DIODE 1SS119			1-215-485-00	METAL 470K 1%	1/6W (KV-E2921D ONLY)
D709	8-719-911-19	DIODE 1SS119		R739	1-249-417-11	CARBON 1K 5%	1/4W
D710	8-719-911-19	DIODE 1SS119					
D711	8-719-300-33	DIODE RU-3AM					
D713	8-719-911-19	DIODE 1SS119					
<JACK>							
J701	1-526-990-11	SOCKET, PICTURE TUBE					
<COIL>							
L704	1-410-878-11	INDUCTOR 33UH					
<TRANSISTOR>							
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q703	8-729-906-70	TRANSISTOR BF871					
Q704	8-729-200-17	TRANSISTOR 2SA1091-0					
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q706	8-729-906-70	TRANSISTOR BF871					
Q707	8-729-200-17	TRANSISTOR 2SA1091-0					
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q709	8-729-906-70	TRANSISTOR BF871					
Q710	8-729-200-17	TRANSISTOR 2SA1091-0					
<RESISTOR>							
R704	1-216-486-00	METAL OXIDE 8.2K 5%	3W F				
R705	1-202-824-00	SOLID 3.3K 10%	1/2W				
R706	1-249-409-11	CARBON 220 5%	1/4W				
R707	1-249-412-11	CARBON 390 5%	1/4W				
R708	1-249-401-11	CARBON 47 5%	1/4W				



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D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<CAPACITOR>				C525	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C002	1-163-205-00	CERAMIC CHIP 0.001MF	5% 50V	C526	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C003	1-124-925-11	ELECT 2.2MF	20% 50V	C527	1-137-098-11	FILM 0.1MF	10% 100V
C004	1-124-120-11	ELECT 220MF	20% 16V	C531	1-124-190-00	ELECT 680MF	10% 25V
C005	1-124-791-11	ELECT 1MF	20% 50V	C532	1-124-122-11	ELECT 100MF	20% 50V
C008	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C533	1-137-096-11	FILM 0.068MF	10% 100V
C009	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C534	1-124-120-11	ELECT 220MF	20% 16V
C010	1-124-120-11	ELECT 220MF	20% 16V	C536	1-131-365-00	TANTALUM 10MF	10% 16V
C011	1-164-232-11	CERAMIC CHIP 0.01MF	50V	C537	1-124-791-11	ELECT 1MF	20% 50V
C013	1-137-098-11	FILM 0.1MF	10% 100V	C538	1-108-680-11	MYLAR 0.001MF	10% 100V
C014	1-137-098-11	FILM 0.1MF	10% 100V	C539	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C015	1-124-902-00	ELECT 0.47MF	20% 50V	C540	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C016	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C592	1-124-122-11	ELECT 100MF	20% 50V
C017	1-137-098-11	FILM 0.1MF	10% 100V	C593	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C018	1-163-127-00	CERAMIC CHIP 270PF	5% 50V	C601 $\Delta$	1-161-964-61	CERAMIC 0.0047MF	250V
C019	1-137-094-11	FILM 0.047MF	10% 100V	C602 $\Delta$	1-161-964-61	CERAMIC 0.0047MF	250V
C021	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C603 $\Delta$	1-161-964-61	CERAMIC 0.0047MF	250V
C023	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C604 $\Delta$	1-125-318-11	ELECT (BLOCK) 220MF	20% 400V
C024	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C605	1-124-484-11	ELECT 220MF	20% 35V
C027	1-124-910-11	ELECT 47MF	20% 50V	C606	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C030	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C607	1-137-028-11	FILM 1MF	10% 63V
C031	1-163-081-00	CERAMIC CHIP 0.22MF	25V	C608	1-124-927-11	ELECT 4.7MF	20% 50V
C032	1-163-081-00	CERAMIC CHIP 0.22MF	25V	C611	1-124-910-11	ELECT 47MF	20% 50V
C033	1-163-181-00	CERAMIC CHIP 100PF	5% 50V	C612	1-108-680-11	MYLAR 0.001MF	10% 100V
C034	1-123-875-11	ELECT 10MF	20% 50V	C613	1-136-539-11	FILM 0.0022MF	3% 2KV
C034	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C614	1-102-030-00	CERAMIC 330PF	10% 500V
C251	1-124-791-11	ELECT 1MF	20% 50V	C615	1-128-142-11	ELECT 1500MF	20% 25V
C252	1-126-233-11	ELECT 22MF	20% 50V	C616	1-102-030-00	CERAMIC 330PF	10% 500V
C253	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C617	1-124-122-11	ELECT 100MF	20% 50V
C254	1-137-098-11	FILM 0.1MF	10% 100V	C618	1-162-115-00	CERAMIC 330PF	10% 2KV
C255	1-124-636-00	ELECT 3300MF	20% 25V	C619	1-128-320-51	ELECT 2200MF	20% 16V
C261	1-124-791-11	ELECT 1MF	20% 50V	C620	1-136-173-00	FILM 0.47MF	5% 50V
C262	1-126-233-11	ELECT 22MF	20% 50V	C621	1-124-347-00	ELECT 100MF	20% 160V
C263	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C622	1-128-320-51	ELECT 2200MF	20% 16V
C264	1-137-098-11	FILM 0.1MF	10% 100V	C623	1-124-910-11	ELECT 47MF	20% 50V
C265	1-124-564-11	ELECT 4700MF	20% 25V	C624	1-124-122-11	ELECT 100MF	20% 50V
C270	1-137-035-11	FILM 0.47MF	10% 100V	C625	1-124-360-00	ELECT 1000MF	20% 16V
C274	1-137-035-11	FILM 0.47MF	10% 100V	C626	1-124-907-11	ELECT 10MF	20% 50V
C501	1-124-927-11	ELECT 4.7MF	20% 50V	C627	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C502	1-124-927-11	ELECT 4.7MF	20% 50V	C631	1-124-927-11	ELECT 4.7MF	20% 50V
C503	1-137-049-11	FILM 0.015MF	10% 400V	C632	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C504	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C633	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C505	1-108-794-11	MYLAR 0.0015MF	5% 50V	C801	1-126-105-11	ELECT 1000MF	20% 35V
C506	1-137-102-11	FILM 0.022MF	10% 250V	C802	1-102-030-00	CERAMIC 330PF	10% 500V
C507	1-137-033-11	FILM 0.33MF	10% 100V	C804	1-123-948-00	ELECT 22MF	20% 250V
C508	1-137-102-11	FILM 0.022MF	10% 250V	C805	1-162-114-00	CERAMIC 0.0047MF	2KV
C509	1-137-098-11	FILM 0.1MF	10% 100V	C806	1-137-098-11	FILM 0.1MF	10% 100V
C510	1-161-959-00	CERAMIC 22PF	10% 500V	C807	1-106-395-00	MYLAR 0.15MF	10% 200V
C511	1-108-686-11	MYLAR 0.0033MF	10% 100V	C810	1-123-024-21	ELECT 33MF	160V
C512	1-137-098-11	FILM 0.1MF	10% 100V	C811	1-136-113-00	FILM 2MF	5% 200V
C513	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C812	1-124-634-11	ELECT 1MF	20% 250V
C514	1-137-031-11	FILM 0.22MF	10% 100V	C813	1-102-212-00	CERAMIC 820PF	10% 500V
C515	1-124-791-11	ELECT 1MF	20% 50V	C814 $\Delta$	1-161-731-51	CERAMIC 0.001MF	10% 2KV
C516	1-108-680-11	MYLAR 0.001MF	10% 100V	C815	1-136-111-00	FILM 1MF	5% 200V
C517	1-124-252-00	ELECT 0.33MF	20% 50V		1-136-540-11	FILM 0.82MF	5% 200V
C518	1-124-902-00	ELECT 0.47MF	20% 50V				(KV-E2521D ONLY)
C519	1-136-173-00	FILM 0.47MF	5% 50V				(KV-E2921D ONLY)
	1-136-171-00	FILM 0.33MF	5% 50V	C817 $\Delta$	1-136-565-11	FILM 0.015MF	3% 1.4KV
			(KV-E2921D ONLY)				(KV-E2521D ONLY)
C520	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V		$\Delta$ 1-136-591-11	FILM 0.017MF	3% 1.4KV
							(KV-E2921D ONLY)
C521	1-137-098-11	FILM 0.1MF	10% 100V	C818 $\Delta$	1-129-721-51	FILM 0.039MF	10% 630V
C522	1-124-122-11	ELECT 100MF	20% 50V	C819 $\Delta$	1-161-731-51	CERAMIC 0.001MF	10% 2KV
C523	1-108-680-11	MYLAR 0.001MF	10% 100V				
C524	1-108-798-11	MYLAR 0.0033MF	5% 50V				



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D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C820	1-137-046-11	FILM	0.0082MF 10% 400V	D618	8-719-109-89	DIODE RD5.6ES-B2	
C821	$\Delta$ 1-162-116-51	CERAMIC	680PF 10% 2KV	D619	8-719-982-24	DIODE MTZJ-33A	
	$\Delta$ 1-162-134-51	CERAMIC	470PF 10% 2KV (KV-E2521D ONLY)	D620	8-719-800-76	DIODE 1SS226	
C822	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	D621	8-719-982-24	DIODE MTZJ-33A	
C823	1-137-043-11	FILM	0.0047MF 10% 400V	D622	8-719-911-19	DIODE 1SS119	
C824	1-102-212-00	CERAMIC	820PF 10% 500V	D623	8-719-911-19	DIODE 1SS119	
C825	1-137-102-11	FILM	0.022MF 10% 250V	D624	8-719-911-19	DIODE 1SS119	
C1601	$\Delta$ 1-136-518-11	FILM	0.33MF 20% 300V	D630	8-719-921-91	DIODE MTZJ-15A	
C1602	$\Delta$ 1-136-519-11	FILM	0.47MF 20% 300V	D801	8-719-300-33	DIODE RU-3AM	
C1603	$\Delta$ 1-164-246-51	CERAMIC	0.0022MF 20% 400V (KV-E2921D ONLY)	D802	8-719-300-33	DIODE RU-3AM	
C1604	$\Delta$ 1-164-246-51	CERAMIC	0.0022MF 20% 400V (KV-E2521D ONLY)	D803	8-719-976-64	DIODE RGP02-17	
C1605	$\Delta$ 1-164-246-51	CERAMIC	0.0022MF 20% 400V	D804	8-719-911-55	DIODE U05G	
C1607	$\Delta$ 1-161-964-61	CERAMIC	0.0047MF 250V	D805	8-719-911-55	DIODE U05G	
<FILTER>				<IC>			
CF001	1-577-364-11	VIBRATOR, CERAMIC		IC001	8-759-515-80	IC SDA20560-A008	
CF501	1-567-888-11	OSCILLATOR, CERAMIC		IC002	8-759-208-06	IC TC4051BPHB	
<CONNECTOR>				IC003	8-759-945-58	IC RC4558P	
CND801	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	(KV-E2921D ONLY)	IC005	8-759-748-56	IC SDA2546	
<DIODE>				IC251	8-759-988-94	IC TDA2050	
D003	8-719-911-19	DIODE 1SS119			4-812-134-00	RIVET NYLON, 3.5; IC251	
D005	8-719-109-89	DIODE RD5.6ES-B2		IC261	8-759-988-94	IC TDA2050	
D006	8-719-982-24	DIODE MTZJ-33A			4-812-134-00	RIVET NYLON, 3.5; IC261	
D007	8-719-982-08	DIODE MTZJ-3.9B		IC501	8-759-970-73	IC TEA2028B	
D009	8-719-109-89	DIODE RD5.6ES-B2		IC502	8-759-944-57	IC TDA8170	
D010	8-719-921-54	DIODE MTZJ-6.2B		IC601	8-759-988-95	IC TEA2260	
D011	8-719-921-54	DIODE MTZJ-6.2B		IC604	8-759-510-52	IC TEA7605	
D012	8-719-911-19	DIODE 1SS119		IC608	8-759-037-26	IC TYA7812CT	
D013	8-719-109-97	DIODE RD6.8ES-B2		<COIL>			
D271	8-719-921-88	DIODE MTZJ-13B		L501	1-408-225-00	INDUCTOR 3.3UH	
D272	8-719-911-19	DIODE 1SS119		L601	*1-420-872-00	COIL, AIR CORE	
D501	8-719-911-19	DIODE 1SS119		L602	1-410-396-41	FERRITE BEAD INDUCTOR	
D504	8-719-911-55	DIODE U05G		L603	1-410-396-41	FERRITE BEAD INDUCTOR	
D506	8-719-800-76	DIODE 1SS226 (KV-E2521D ONLY)		L604	1-410-671-31	INDUCTOR 47UH	
D508	8-719-911-19	DIODE 1SS119		L605	1-459-585-11	COIL (WITH CORE) (DRUM TYPE)	
D509	8-719-911-19	DIODE 1SS119		L606	1-421-013-00	COIL (HORIZONTAL CHOKE) 25UH	
D511	8-719-911-55	DIODE U05G		L607	1-410-671-31	INDUCTOR 47UH	
D512	8-719-911-55	DIODE U05G		L801	1-459-087-00	COIL, HCC DUST CORE 3.9MMH (KV-E2921D ONLY)	
D513	8-719-010-34	DIODE UZ-4.7BSC		L803	1-459-104-00	COIL, DUST CORE	
D514	8-719-911-19	DIODE 1SS119 (KV-E2921D ONLY)		L804	1-408-239-00	INDUCTOR 4.7MMH	
D515	8-719-911-19	DIODE 1SS119 (KV-E2921D ONLY)		L805	1-459-755-11	COIL, HORIZONTAL LINEARITY (KV-E2521D ONLY)	
D601	$\Delta$ 8-719-510-63	DIODE DASB60L-F			1-459-907-11	COIL, HORIZONTAL LINEARITY (KV-E2921D ONLY)	
D602	8-719-300-33	DIODE RU-3AM		L806	1-459-111-00	COIL, DRAM CORE (CD1) (KV-E2521D ONLY)	
D603	8-719-911-55	DIODE U05G			1-459-087-00	COIL, HCC DUST CORE 3.9MMH (KV-E2921D ONLY)	
D604	8-719-911-55	DIODE U05G		L809	*1-420-872-00	COIL, AIR CORE	
D605	8-719-911-55	DIODE U05G		L810	$\Delta$ 1-421-982-12	PMC (KV-E2521D ONLY)	
D606	8-719-300-33	DIODE RU-3AM			$\Delta$ 1-421-794-21	TRANSFORMER, FERRITE (PMT) (KV-E2921D ONLY)	
D607	8-719-300-33	DIODE RU-3AM		<TRANSFORMER>			
D608	8-719-300-33	DIODE RU-3AM		LF1601	$\Delta$ 1-421-866-12	LFT	
D609	8-719-982-24	DIODE MTZJ-33A		LF1602	$\Delta$ 1-421-776-11	LFT	
D610	8-719-300-59	DIODE CTU-12S		LF1603	$\Delta$ 1-421-862-11	LFT	
D611	8-719-900-26	DIODE ERD29-08J		T601	$\Delta$ 1-450-038-11	S.R.T (KV-E2521D ONLY)	
D612	8-719-300-59	DIODE CTU-12S					
D613	8-719-979-85	DIODE EGP20G					
D614	8-719-979-85	DIODE EGP20G					
D616	8-719-921-54	DIODE MTZJ-6.2B					
D617	8-719-911-19	DIODE 1SS119					



The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

**D**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
T601	$\Delta$ 1-450-037-11	S.R.T (KV-E2921D ONLY)		R015	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
T602	$\Delta$ 1-424-277-11	TRANSFORMER, TRIGGER PULSE		R016	1-216-085-00	METAL GLAZE 33K 5%	1/10W
T801	$\Delta$ 1-437-090-21	HDT		R017	1-216-748-11	METAL GLAZE 39K 5%	1/10W
T802	$\Delta$ 1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)		R018	1-216-095-00	METAL GLAZE 82K 5%	1/10W
<IC LINK>				R019	1-216-025-00	METAL GLAZE 100 5%	1/10W
PS601	$\Delta$ 1-532-984-91	LINK, IC (ICP-N50) 2A		R020	1-216-025-00	METAL GLAZE 100 5%	1/10W
PS602	$\Delta$ 1-532-984-91	LINK, IC (ICP-N50) 2A		R021	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
PS603	$\Delta$ 1-532-679-91	LINK, IC (ICP-N15) 0.6A		R022	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
PS604	$\Delta$ 1-532-984-91	LINK, IC (ICP-N50) 2A		R024	1-216-073-00	METAL GLAZE 10K 5%	1/10W
<TRANSISTOR>				R025	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q001	8-729-901-01	TRANSISTOR DTC144EK		R026	1-216-182-00	METAL GLAZE 220 5%	1/8W
Q002	8-729-901-01	TRANSISTOR DTC144EK		R027	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q003	8-729-216-22	TRANSISTOR 2SA1162-G		R028	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q004	8-729-216-22	TRANSISTOR 2SA1162-G		R029	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q005	8-729-901-01	TRANSISTOR DTC144EK		R030	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q006	8-729-901-01	TRANSISTOR DTC144EK		R031	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q007	8-729-901-78	TRANSISTOR 2SC2412K-R		R032	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q008	8-729-901-78	TRANSISTOR 2SC2412K-R		R033	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q009	8-729-901-78	TRANSISTOR 2SC2412K-R		R034	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q010	8-729-901-78	TRANSISTOR 2SC2412K-R		R035	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q251	8-729-901-78	TRANSISTOR 2SC2412K-R		R036	1-216-083-00	METAL GLAZE 27K 5%	1/10W
Q261	8-729-901-78	TRANSISTOR 2SC2412K-R		R037	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
Q271	8-729-901-78	TRANSISTOR 2SC2412K-R		R038	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
Q502	8-729-216-22	TRANSISTOR 2SA1162-G		R039	1-216-081-00	METAL GLAZE 22K 5%	1/10W
Q505	8-729-140-96	TRANSISTOR 2SD774-34		R040	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q506	8-729-140-97	TRANSISTOR 2SB734-34		R041	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q507	8-729-216-22	TRANSISTOR 2SA1162-G		R042	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q598	8-729-216-22	TRANSISTOR 2SA1162-G		R043	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q601	8-729-122-03	TRANSISTOR 2SA1220A-P		R044	1-216-097-00	METAL GLAZE 100K 5%	1/10W
Q602	8-729-209-02	TRANSISTOR 2SD1548-LB		R045	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q603	8-729-122-03	TRANSISTOR 2SA1220A-P		R046	1-216-095-00	METAL GLAZE 82K 5%	1/10W
Q604	8-729-216-22	TRANSISTOR 2SA1162-G		R047	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q605	8-729-901-78	TRANSISTOR 2SC2412K-R		R048	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q606	8-729-901-78	TRANSISTOR 2SC2412K-R		R049	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q607	8-729-920-92	TRANSISTOR 2SD2096-EF		R050	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
Q608	8-729-901-78	TRANSISTOR 2SC2412K-R		R051	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q609	8-729-320-62	TRANSISTOR 2SD789-34		R052	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q801	8-729-901-78	TRANSISTOR 2SC2412K-R		R053	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q804	8-729-304-50	TRANSISTOR 2SD1941-06		R054	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q805	8-729-119-80	TRANSISTOR 2SC2688-LK		R055	1-216-037-00	METAL GLAZE 330 5%	1/10W
<RESISTOR>				R056	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR1	1-216-296-00	METAL GLAZE 0 5%	1/8W	R057	1-216-025-00	METAL GLAZE 100 5%	1/10W
JR3	1-216-296-00	METAL GLAZE 0 5%	1/8W	R058	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR4	1-216-296-00	METAL GLAZE 0 5%	1/8W	R059	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR5	1-216-295-00	METAL GLAZE 0 5%	1/10W	R060	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR6	1-216-295-00	METAL GLAZE 0 5%	1/10W	R061	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
JR7	1-216-296-00	METAL GLAZE 0 5%	1/8W	R062	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR8	1-216-295-00	METAL GLAZE 0 5%	1/10W	R063	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R001	1-216-041-00	METAL GLAZE 470 5%	1/10W	R064	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R002	1-216-041-00	METAL GLAZE 470 5%	1/10W	R065	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R003	1-216-198-00	METAL GLAZE 1K 5%	1/8W	R066	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R004	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R067	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R005	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R068	1-216-174-00	METAL GLAZE 100 5%	1/8W
R006	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R069	1-216-174-00	METAL GLAZE 100 5%	1/8W
R007	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R070	1-216-198-00	METAL GLAZE 1K 5%	1/8W
R008	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R071	1-216-198-00	METAL GLAZE 1K 5%	1/8W
R009	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R072	1-216-222-00	METAL GLAZE 10K 5%	1/8W
R010	1-216-041-00	METAL GLAZE 470 5%	1/10W	R073	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R011	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R075	1-216-041-00	METAL GLAZE 470 5%	1/10W
R012	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R076	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R013	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R078	1-216-198-00	METAL GLAZE 1K 5%	1/8W
R014	1-216-085-00	METAL GLAZE 33K 5%	1/10W	R079	1-216-073-00	METAL GLAZE 10K 5%	1/10W
				R080	1-216-073-00	METAL GLAZE 10K 5%	1/10W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R081	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R534	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R082	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R535	1-249-749-00	CARBON	2.2M 5% 1/4W
R083	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R536	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R084	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R537	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R085	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R538	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R086	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R539	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R087	1-216-035-00	METAL GLAZE	270 5% 1/10W	R540	1-216-013-00	METAL GLAZE	33 5% 1/10W
R088	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R541	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R093	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R542	1-216-308-00	METAL GLAZE	4.7 5% 1/10W
R094	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R543	1-249-451-11	CARBON	2.2 5% 1/4W
R095	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R544	1-247-745-11	CARBON	330 5% 1/2W
R096	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R545	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R098	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R546	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R251	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R547	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R252	1-216-039-00	METAL GLAZE	390 5% 1/10W	R548	1-216-349-00	METAL OXIDE	1 5% 1W F
R253	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R549	1-216-454-11	METAL OXIDE	390 5% 2W F
R254	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R550	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R255	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R551	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R256	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R553	1-215-869-11	METAL OXIDE	1K 5% 1W
R257	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R554	1-216-037-00	METAL GLAZE	330 5% 1/10W
R258	1-215-869-11	METAL OXIDE	1K 5% 1W F	R555	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R259	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R556	1-216-025-00	METAL GLAZE	100 5% 1/10W
R261	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R557	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R262	1-216-039-00	METAL GLAZE	390 5% 1/10W	R558	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R263	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R559	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R264	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R560	1-216-037-00	METAL GLAZE	330 5% 1/10W
R265	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R561	1-216-107-00	METAL GLAZE	270K 5% 1/10W
R266	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R570	1-216-045-00	METAL GLAZE	680 5% (KV-E2921D ONLY)
R267	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R591	1-216-047-00	METAL GLAZE	820 5% 1/10W
R268	1-215-869-11	METAL OXIDE	1K 5% 1W F	R592	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R269	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R593	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R270	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R594	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R271	1-216-045-00	METAL GLAZE	680 5% 1/10W	R597	1-216-041-00	METAL GLAZE	470 5% 1/10W
R272	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R598	1-215-900-11	METAL OXIDE	22K 5% 2W F
R273	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R600	1-249-381-11	CARBON	1 5% 1/4W
R274	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R601	1-216-353-00	METAL OXIDE	2.2 5% 1W F
R500	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R603	1-216-469-11	METAL OXIDE	12 5% 3W F
R501	1-216-041-00	METAL GLAZE	470 5% 1/10W	R604	1-216-025-00	METAL GLAZE	100 5% 1/10W
R502	1-216-033-00	METAL GLAZE	220 5% 1/10W	R605	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R503	1-216-035-00	METAL GLAZE	270 5% 1/10W	R606	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R504	1-249-420-11	CARBON	1.8K 5% 1/4W	R607	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R505	1-216-077-00	METAL GLAZE	15K 5% 1/10W		1-216-067-00	METAL GLAZE	5.6K 5% (KV-E2521D ONLY)
R506	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W				
R509	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R608	1-216-488-11	METAL OXIDE	18K 5% 3W F
R510	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R609	1-216-007-00	METAL GLAZE	18 5% 1/10W
R514	1-216-033-00	METAL GLAZE	220 5% 1/10W	R610	1-244-941-00	CARBON	680K 5% 1/2W
R515	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R611	1-216-015-00	METAL GLAZE	39 5% 1/10W
R517	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R612	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R518	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R613	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R519	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R614	1-205-758-11	WIREWOUND	100 10% 10W F
R520	1-216-037-00	METAL GLAZE	330 5% 1/10W	R616	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R521	1-216-025-00	METAL GLAZE	100 5% 1/10W	R617	1-216-037-00	METAL GLAZE	330 5% 1/10W
R522	1-215-469-00	METAL	100K 1% 1/6W	R618	1-216-431-11	METAL OXIDE	560 5% 1W F
R523	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R619	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R524	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R620	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R525	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R621	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R526	1-249-409-11	CARBON	220 5% 1/4W F	R622	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R527	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R623	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R528	1-216-031-00	METAL GLAZE	180 5% 1/10W	R624	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R529	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R625	1-215-865-11	METAL OXIDE	220 5% 1W F
R530	1-249-448-11	CARBON	1.2 5% 1/4W F				
R531	1-216-099-00	METAL GLAZE	120K 5% 1/10W				
R532	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R533	1-216-295-00	METAL GLAZE	0 5% 1/10W				



The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R626	1-216-037-00	METAL GLAZE	330 5% 1/10W	*****			
R628	1-216-001-00	METAL GLAZE	10 5% 1/10W	*1-634-193-11	VM BOARD (KV-E2921D ONLY)		
R629	1-216-037-00	METAL GLAZE	330 5% 1/10W	*****			
R633	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*1-568-878-51	PIN, CONNECTOR 3P		
R634	1-216-430-11	METAL OXIDE	390 5% 1W F	<CAPACITOR>			
R635	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C751	1-101-361-00	CERAMIC	150PF 5% 50V
R636	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C752	1-108-629-11	MYLAR	0.018MF 10% 100V
R643	1-217-189-21	WIREWOUND	0.12 5% 2W F	C753	1-137-047-11	FILM	0.01MF 10% 400V
R651	1-216-025-00	METAL GLAZE	100 5% 1/10W	C754	1-102-980-00	CERAMIC	270PF 5% 50V
R653	1-205-758-11	WIREWOUND	100 10% 10W F	C757	1-108-692-11	MYLAR	0.01MF 10% 200V
R802	1-249-443-11	CARBON	0.47 5% 1/4W F	C759	1-123-875-11	ELECT	10MF 20% 50V
R805	1-249-448-11	CARBON	1.2 5% 1/4W F	C760	1-124-917-11	ELECT	33MF 20% 50V
R806	1-216-093-00	METAL GLAZE	68K 5% 1/10W	C761	1-101-006-00	CERAMIC	0.047MF 50V
R807	1-215-869-11	METAL OXIDE	1K 5% 1W F	C762	1-137-047-11	FILM	0.01MF 10% 400V
R809	1-202-821-11	SOLID	1.8K 10% 1/2W	<COIL>			
R810	1-202-818-00	SOLID	1K 10% 1/2W	L751	1-408-413-00	INDUCTOR	22UH
R811	1-215-882-00	METAL OXIDE	22 5% 2W F	L770	1-410-665-31	INDUCTOR	15UH
R812	1-249-494-11	CARBON	68K 5% 1/2W (KV-E2521D ONLY)	<TRANSISTOR>			
	1-247-281-00	CARBON	51K 5% 1/2W (KV-E2921D ONLY)	Q751	8-729-119-78	TRANSISTOR	2SC2785-HFE
R815	1-215-884-11	METAL OXIDE	47 5% 2W F	Q752	8-729-119-78	TRANSISTOR	2SC2785-HFE
R816	1-215-868-00	METAL OXIDE	680 5% 1W F	Q753	8-729-140-97	TRANSISTOR	2SB734-34
R817	1-216-049-00	METAL GLAZE	1K 5% 1/10W	Q754	8-729-140-96	TRANSISTOR	2SD774-34
R820	1-249-403-11	CARBON	68 5% 1/4W	<RESISTOR>			
R821	1-247-725-11	CARBON	10K 5% 1/4W F	R751	1-249-418-11	CARBON	1.2K 5% 1/4W
R822	1-217-778-11	FUSIBLE	1K 5% 1W F	R752	1-249-426-11	CARBON	5.6K 5% 1/4W
R825	1-216-345-11	METAL OXIDE	0.47 5% 1W F	R753	1-249-414-11	CARBON	560 5% 1/4W
R826	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R754	1-249-434-11	CARBON	27K 5% 1/4W
R827	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R755	1-249-405-11	CARBON	100 5% 1/4W
R828	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R756	1-249-419-11	CARBON	1.5K 5% 1/4W
R829	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	R757	1-249-405-11	CARBON	100 5% 1/4W
R831	1-249-451-11	CARBON	2.2 5% 1/4W	R758	1-249-409-11	CARBON	220 5% 1/4W
R1601 $\Delta$	1-246-513-75	CARBON	47K 5% 1/4W	R760	1-249-411-11	CARBON	330 5% 1/4W
R1602 $\Delta$	1-244-945-91	CARBON	1M 5% 1/2W	R761	1-249-429-11	CARBON	10K 5% 1/4W
R1603 $\Delta$	1-217-328-11	WIREWOUND	2.7 10% 7W F	R762	1-247-895-00	CARBON	470K 5% 1/4W
R1604 $\Delta$	1-246-513-75	CARBON	47K 5% 1/4W	R763	1-249-429-11	CARBON	10K 5% 1/4W
R1605 $\Delta$	1-218-265-91	METAL GLAZE	8.2M 5% 1W	R764	1-249-455-11	CARBON	4.7 5% 1/4W F
R5501	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R765	1-249-455-11	CARBON	4.7 5% 1/4W F
R5503	1-216-308-00	METAL GLAZE	4.7 5% 1/10W (KV-E2521D ONLY)	R766	1-247-753-11	CARBON	1.2K 5% 1/2W
	1-216-001-00	METAL GLAZE	10 5% 1/10W (KV-E2921D ONLY)	R767	1-247-751-11	CARBON	820 5% 1/2W
R5504	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R768	1-215-887-00	METAL OXIDE	150 5% 2W F
R5505	1-216-001-00	METAL GLAZE	10 5% 1/10W	R769	1-212-889-00	FUSIBLE	220 5% 1/4W F
R5506	1-216-075-00	METAL GLAZE	12K 5% 1/10W (KV-E2921D ONLY)	*****			
<VARIABLE RESISTOR>				A-1645-013-A	V BOARD, COMPLETE		
RV501	1-238-013-11	RES, ADJ, CARBON 2.2K		*****			
RV502	1-238-016-11	RES, ADJ, CARBON 10K		<CAPACITOR>			
RV601	1-238-011-11	RES, ADJ, CARBON 470		C1	1-126-101-11	ELECT	100MF 20% 16V
<SPARK GAP>				C2	1-163-038-00	CERAMIC CHIP	0.1MF 25V
SG801	1-519-422-11	GAP, SPARK		C3	1-124-120-11	ELECT	220MF 20% 16V
<THERMISTOR>				C4	1-163-077-00	CERAMIC CHIP	0.1MF 50V
THP601 $\Delta$	1-808-059-32	THERMISTOR, POSITIVE		C5	1-124-120-11	ELECT	220MF 20% 16V
				C6	1-163-038-00	CERAMIC CHIP	0.1MF 25V



The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C7	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	JR11	1-216-295-00	METAL GLAZE	0 5% 1/10W
C8	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	JR12	1-216-295-00	METAL GLAZE	0 5% 1/10W
C9	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	JR13	1-216-296-00	METAL GLAZE	0 5% 1/8W
C10	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JR14	1-216-296-00	METAL GLAZE	0 5% 1/8W
C11	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JR16	1-216-296-00	METAL GLAZE	0 5% 1/8W
C12	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JR17	1-216-295-00	METAL GLAZE	0 5% 1/10W
C13	1-163-038-00	CERAMIC CHIP 0.1MF	25V	JR21	1-216-296-00	METAL GLAZE	0 5% 1/8W
C14	1-124-927-11	ELECT 4.7MF	20% 50V	JR22	1-216-295-00	METAL GLAZE	0 5% 1/10W
C15	1-124-927-11	ELECT 4.7MF	20% 50V	JR23	1-216-295-00	METAL GLAZE	0 5% 1/10W
C16	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JR24	1-216-296-00	METAL GLAZE	0 5% 1/8W
C17	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JR26	1-216-296-00	METAL GLAZE	0 5% 1/8W
C18	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	JR27	1-216-295-00	METAL GLAZE	0 5% 1/10W
C19	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	JR201	1-216-295-00	METAL GLAZE	0 5% 1/10W
<CONNECTOR>				JR204	1-216-295-00	METAL GLAZE	0 5% 1/10W
CNV1	*1-565-393-11	CONNECTOR, BOARD TO BOARD		JR207	1-216-295-00	METAL GLAZE	0 5% 1/10W
CNV2	*1-565-393-11	CONNECTOR, BOARD TO BOARD		JR208	1-216-295-00	METAL GLAZE	0 5% 1/10W
<DIODE>				JR211	1-216-295-00	METAL GLAZE	0 5% 1/10W
D1	8-719-105-91	DIODE RD5.6M-B2		JR213	1-216-295-00	METAL GLAZE	0 5% 1/10W
D3	8-719-914-44	DIODE DAP202K		JR219	1-216-296-00	METAL GLAZE	0 5% 1/8W
D4	8-719-400-18	DIODE MA152WK		JR220	1-216-295-00	METAL GLAZE	0 5% 1/10W
D5	8-719-914-44	DIODE DAP202K		JR223	1-216-295-00	METAL GLAZE	0 5% 1/10W
D6	8-719-400-18	DIODE MA152WK		R1	1-218-326-11	METAL GLAZE	470 5% 1/2W
D7	8-719-105-52	DIODE RD3.6M-B2		R3	1-216-049-00	METAL GLAZE	1K 5% 1/10W
D9	8-719-106-17	DIODE RD6.8M-B2		R4	1-216-025-00	METAL GLAZE	100 5% 1/10W
<IC>				R5	1-216-047-00	METAL GLAZE	820 5% 1/10W
IC1	8-759-038-58	IC SDA20162-A002		R6	1-216-001-00	METAL GLAZE	10 5% 1/10W
IC2	8-759-510-46	IC SAA5246P/E		R7	1-216-083-00	METAL GLAZE	27K 5% 1/10W
IC3	8-759-510-49	IC FCB61C65-70P		R8	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
<COIL>				R9	1-216-308-00	METAL GLAZE	4.7 5% 1/10W
L1	1-408-403-00	INDUCTOR 3.3UH		R02	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
L2	1-408-407-00	INDUCTOR 6.8UH		R10	1-218-325-11	METAL GLAZE	120 5% 1/4W
L3	1-408-407-00	INDUCTOR 6.8UH		R11	1-218-325-11	METAL GLAZE	120 5% 1/4W
L4	1-408-407-00	INDUCTOR 6.8UH		R12	1-218-325-11	METAL GLAZE	120 5% 1/4W
<IC LINK>				R13	1-216-025-00	METAL GLAZE	100 5% 1/10W
PS1	$\Delta$ 1-532-679-91	LINK, IC (ICP-N15) 0.6A		R14	1-216-001-00	METAL GLAZE	10 5% 1/10W
<TRANSISTOR>				R15	1-216-013-00	METAL GLAZE	33 5% 1/10W
Q1	8-729-900-53	TRANSISTOR DTC114EK		R16	1-216-013-00	METAL GLAZE	33 5% 1/10W
Q2	8-729-920-92	TRANSISTOR 2SD2096-EF		R17	1-216-013-00	METAL GLAZE	33 5% 1/10W
Q3	8-729-901-78	TRANSISTOR 2SC2412K-R		R18	1-216-025-00	METAL GLAZE	100 5% 1/10W
Q4	8-729-901-78	TRANSISTOR 2SC2412K-R		R19	1-216-025-00	METAL GLAZE	100 5% 1/10W
Q5	8-729-807-87	TRANSISTOR 2SB1295-UL6		R20	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q6	8-729-807-87	TRANSISTOR 2SB1295-UL6		R21	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q7	8-729-807-87	TRANSISTOR 2SB1295-UL6		R22	1-216-168-00	METAL GLAZE	56 5% 1/8W
Q8	8-729-901-78	TRANSISTOR 2SC2412K-R		R23	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
<RESISTOR>				R24	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JR01	1-216-295-00	METAL GLAZE	0 5% 1/10W	R25	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JR02	1-216-295-00	METAL GLAZE	0 5% 1/10W	R26	1-216-049-00	METAL GLAZE	1K 5% 1/10W
JR03	1-216-295-00	METAL GLAZE	0 5% 1/10W	R27	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
JR08	1-216-295-00	METAL GLAZE	0 5% 1/10W	R28	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
JR09	1-216-295-00	METAL GLAZE	0 5% 1/10W	R34	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
<VARIABLE RESISTOR>				R35	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R40	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R41	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R42	1-216-049-00	METAL GLAZE	1K 5% 1/10W
				R44	1-216-295-00	METAL GLAZE	0 5% 1/10W
				R46	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R47	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R49	1-216-049-00	METAL GLAZE	1K 5% 1/10W
				RV1	1-238-012-11	RES, ADJ, CARBON 1K	



V	H1	H2	J2	J1
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REF.NO. PART NO. DESCRIPTION

<CRYSTAL>

X1 1-579-266-21 CRYSTAL VIBRATOR  
X2 1-577-364-11 VIBRATOR, CERAMIC

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\*1-638-391-11 H1 BOARD  
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1-562-837-11 JACK  
\*1-564-512-11 PLUG, CONNECTOR 9P  
1-568-678-11 TERMINAL BLOCK, S 3P  
\*1-568-879-51 PIN, CONNECTOR 4P  
\*1-568-881-51 PIN, CONNECTOR 6P

<RESISTOR>

R1651 1-249-413-11 CARBON 470 5% 1/4W  
R1652 1-249-413-11 CARBON 470 5% 1/4W

<SWITCH>

S1651 1-571-532-21 SWITCH, TACTIL  
S1652 1-571-532-21 SWITCH, TACTIL  
S1653 1-571-532-21 SWITCH, TACTIL

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\*1-638-392-11 H2 BOARD  
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\*1-568-882-51 PIN, CONNECTOR 7P  
\*4-374-987-01 GUIDE, LIGHT  
\*4-381-686-01 BRACKET (B), LIGHT GUIDE

<DIODE>

D1651 8-719-948-31 DIODE LD-201VR  
\*4-201-076-01 HOLDER, LED; D1651  
D1652 8-719-948-31 DIODE LD-201VR  
\*4-201-076-01 HOLDER, LED; D1652  
D1654 8-719-948-31 DIODE LD-201VR  
\*4-201-076-01 HOLDER, LED; D1654

<IC>

IC1651 8-741-101-75 IC SBX1610-11

<RESISTOR>

R1662 1-249-413-11 CARBON 470 5% 1/4W

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\*1-638-393-11 J2 BOARD  
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1-537-339-11 TERMINAL BOARD  
\*1-560-278-21 PLUG, CONNECTOR 4P  
\*1-564-517-11 PLUG, CONNECTOR 2P  
\*1-564-519-11 PLUG, CONNECTOR 4P

<CAPACITOR>

C1751 1-101-005-00 CERAMIC 0.022MF 50V  
C1752 1-101-005-00 CERAMIC 0.022MF 50V  
C1755 1-102-114-00 CERAMIC 470PF 10% 50V  
C1756 1-102-114-00 CERAMIC 470PF 10% 50V

REMARK

REF.NO. PART NO.

DESCRIPTION

REMARK

<COIL>

L1751 1-412-240-11 INDUCTOR, WIDE BAND  
L1752 1-412-240-11 INDUCTOR, WIDE BAND

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A-1651-018-A J1 BOARD, COMPLETE (KV-E2521D ONLY)

A-1651-020-A J1 BOARD, COMPLETE (KV-E2921D ONLY)

1-561-534-41 SOCKET 21P  
\*1-564-524-11 PLUG, CONNECTOR 9P  
\*1-564-527-11 PLUG, CONNECTOR 12P  
\*1-566-641-11 CONNECTOR, HINGE (TAB) 18P

<CAPACITOR>

C203 1-124-925-11 ELECT 2.2MF 20% 50V  
C205 1-124-927-11 ELECT 4.7MF 20% 50V  
C206 1-124-925-11 ELECT 2.2MF 20% 50V  
C207 1-124-927-11 ELECT 4.7MF 20% 50V  
C213 1-126-233-11 ELECT 22MF 20% 50V

C214 1-137-045-11 FILM 0.0068MF 10% 400V  
C217 1-137-045-11 FILM 0.0068MF 10% 400V  
C218 1-137-102-11 FILM 0.022MF 10% 250V  
C219 1-137-102-11 FILM 0.022MF 10% 250V  
C220 1-108-686-11 MYLAR 0.0033MF 10% 100V

C221 1-108-686-11 MYLAR 0.0033MF 10% 100V  
C222 1-137-095-11 FILM 0.056MF 10% 100V  
C223 1-137-095-11 FILM 0.056MF 10% 100V  
C224 1-137-047-11 FILM 0.01MF 10% 400V  
C225 1-136-173-00 FILM 0.47MF 5% 50V

C226 1-136-173-00 FILM 0.47MF 5% 50V  
C227 1-137-102-11 FILM 0.022MF 10% 250V  
C228 1-137-104-11 FILM 0.033MF 10% 250V  
C229 1-137-049-11 FILM 0.015MF 10% 400V  
C230 1-137-049-11 FILM 0.015MF 10% 400V

C231 1-124-902-00 ELECT 0.47MF 20% 50V  
C232 1-123-875-11 ELECT 10MF 20% 50V  
C233 1-163-005-11 CERAMIC CHIP 470PF 10% 50V  
C234 1-163-005-11 CERAMIC CHIP 470PF 10% 50V  
C235 1-163-005-11 CERAMIC CHIP 470PF 10% 50V

C236 1-163-005-11 CERAMIC CHIP 470PF 10% 50V  
C237 1-124-902-00 ELECT 0.47MF 20% 50V  
C238 1-163-125-00 CERAMIC CHIP 220PF 5% 50V  
C239 1-126-103-11 ELECT 470MF 20% 16V  
C240 1-163-018-00 CERAMIC CHIP 0.0056MF 10% 50V

C241 1-163-018-00 CERAMIC CHIP 0.0056MF 10% 50V  
C242 1-163-033-00 CERAMIC CHIP 0.022MF 50V  
C243 1-163-033-00 CERAMIC CHIP 0.022MF 50V  
C244 1-163-033-00 CERAMIC CHIP 0.022MF 50V  
C245 1-163-033-00 CERAMIC CHIP 0.022MF 50V

C1401 1-123-875-11 ELECT 10MF 20% 50V  
C1402 1-126-103-11 ELECT 470MF 20% 16V  
C1403 1-163-003-11 CERAMIC CHIP 330PF 10% 50V  
C1404 1-137-035-11 FILM 0.47MF 10% 100V  
C1405 1-136-017-00 CERAMIC CHIP 0.0047MF 50V

C1406 1-137-035-11 FILM 0.47MF 10% 100V  
C1407 1-124-910-11 ELECT 47MF 20% 50V  
C1408 1-124-122-11 ELECT 100MF 20% 50V  
C1409 1-126-233-11 ELECT 22MF 20% 50V  
C1410 1-123-875-11 ELECT 10MF 20% 50V



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# J1

REF. NO. PART NO. DESCRIPTION

R226	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R227	1-216-033-00	METAL GLAZE	220	5%	1/10W
R228	1-216-033-00	METAL GLAZE	220	5%	1/10W
R229	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R230	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R231	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R232	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R233	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R234	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R240	1-216-033-00	METAL GLAZE	220	5%	1/10W
R241	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R242	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R243	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R244	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R245	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R246	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R247	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R248	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R249	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R250	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1401	1-216-023-00	METAL GLAZE	82	5%	1/10W
R1402	1-216-170-00	METAL GLAZE	68	5%	1/8W
R1403	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1404	1-216-178-00	METAL GLAZE	150	5%	1/8W
R1405	1-249-429-11	CARBON	10K	5%	1/4W
R1407	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1408	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1409	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1410	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1411	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1412	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1413	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1414	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1415	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1416	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1417	1-216-023-00	METAL GLAZE	82	5%	1/10W
R1418	1-247-738-11	CARBON	82	5%	1/2W F
R1422	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1423	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1424	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1425	1-216-045-00	METAL GLAZE	680	5%	1/10W
R1426	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1427	1-216-001-00	METAL GLAZE	10	5%	1/10W
R1428	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1429	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1430	1-216-170-00	METAL GLAZE	68	5%	1/8W
R1431	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1432	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1433	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1434	1-249-393-11	CARBON	10	5%	1/4W F
R1437	1-249-429-11	CARBON	10K	5%	1/4W
R1440	1-216-045-00	METAL GLAZE	680	5%	1/10W
R1441	1-216-045-00	METAL GLAZE	680	5%	1/10W
R1442	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1443	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1444	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1445	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R1446	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1447	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1448	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1452	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1453	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1454	1-216-180-00	METAL GLAZE	180	5%	1/8W
R1455	1-216-180-00	METAL GLAZE	180	5%	1/8W

REMARK

REF. NO. PART NO. DESCRIPTION

R1457	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1459	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1460	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1461	1-216-190-00	METAL GLAZE	470	5%	1/8W
R1462	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1463	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1464	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R1465	1-216-023-00	METAL GLAZE	82	5%	1/10W
R1466	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1467	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1468	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1469	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1470	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1471	1-216-023-00	METAL GLAZE	82	5%	1/10W
R1472	1-216-023-00	METAL GLAZE	82	5%	1/10W
R1473	1-216-023-00	METAL GLAZE	82	5%	1/10W
R1474	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1476	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1477	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R1478	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1480	1-216-190-00	METAL GLAZE	470	5%	1/8W
R1482	1-216-178-00	METAL GLAZE	150	5%	1/8W
R1483	1-216-178-00	METAL GLAZE	150	5%	1/8W
R1484	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1485	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1486	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1487	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1488	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1489	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1501	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1502	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1503	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1504	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1505	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1506	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1509	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R1510	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1511	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1512	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1513	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R1514	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1515	1-216-117-00	METAL GLAZE	680K	5%	1/10W (KV-E2521D ONLY)
R1516	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R1517	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1519	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R1520	1-216-113-00	METAL GLAZE	470K	5%	1/10W (KV-E2521D ONLY)
	1-216-111-00	METAL GLAZE	390K	5%	1/10W (KV-E2921D ONLY)
R1521	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R1550	1-216-349-00	METAL OXIDE	1	5%	1W F (KV-E2921D ONLY)
R1556	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
<VARIABLE RESISTOR>					
RV1501	1-238-023-11	RES, ADJ, CARBON	470K		
RV1502	1-238-016-11	RES, ADJ, CARBON	10K		
RV1503	1-238-017-11	RES, ADJ, CARBON	22K		
RV1504	1-238-012-11	RES, ADJ, CARBON	1K		
RV1505	1-238-023-11	RES, ADJ, CARBON	470K		
RV1506	1-238-017-11	RES, ADJ, CARBON	22K		



The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

**J1 IFG**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
RV1507	1-238-009-11	RES, ADJ, CARBON 220		IC1	8-759-003-90	IC TBA129	
RV1508	1-238-016-11	RES, ADJ, CARBON 10K		IC2	8-759-003-90	IC TBA129	
RV1509	1-238-023-11	RES, ADJ, CARBON 470K		IC3	8-759-030-48	IC TDA6600-2	
*****				IC4	8-759-513-48	IC TDA2595/V9	
A-1654-004-A	IFG BOARD, COMPLETE			<COIL>			
*****				L1	1-408-410-00	INDUCTOR	12UH
*1-565-488-11	CONNECTOR, BOARD TO BOARD 12P			L2	1-408-410-00	INDUCTOR	12UH
<CAPACITOR>				L3	1-410-064-11	INDUCTOR	2.7MMH
C1	1-164-232-11	CERAMIC CHIP 0.01MF	50V	L4	1-408-421-00	INDUCTOR	100UH
C2	1-164-232-11	CERAMIC CHIP 0.01MF	50V	L5	1-408-421-00	INDUCTOR	100UH
C3	1-164-232-11	CERAMIC CHIP 0.01MF	50V	<TRANSISTOR>			
C4	1-164-232-11	CERAMIC CHIP 0.01MF	50V	Q2	8-729-901-00	TRANSISTOR DTC124EK	
C5	1-164-232-11	CERAMIC CHIP 0.01MF	50V	Q3	8-729-216-22	TRANSISTOR 2SA1162-G	
C6	1-164-232-11	CERAMIC CHIP 0.01MF	50V	Q4	8-729-901-00	TRANSISTOR DTC124EK	
C7	1-124-791-11	ELECT 1MF	20% 50V	<RESISTOR>			
C8	1-123-875-11	ELECT 10MF	20% 50V	JR8	1-216-296-00	METAL GLAZE 0	5% 1/8W
C9	1-130-471-00	MYLAR 0.001MF	5% 50V	JR10	1-216-296-00	METAL GLAZE 0	5% 1/8W
C10	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	R1	1-216-045-00	METAL GLAZE 680	5% 1/10W
C11	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	R2	1-216-043-00	METAL GLAZE 560	5% 1/10W
C12	1-136-298-00	FILM 0.0033MF	2% 100V	R3	1-216-043-00	METAL GLAZE 560	5% 1/10W
C13	1-124-477-11	ELECT 47MF	20% 16V	R5	1-216-045-00	METAL GLAZE 680	5% 1/10W
C14	1-124-477-11	ELECT 47MF	20% 16V	R6	1-216-043-00	METAL GLAZE 560	5% 1/10W
C15	1-124-477-11	ELECT 47MF	20% 16V	R7	1-216-043-00	METAL GLAZE 560	5% 1/10W
C16	1-124-477-11	ELECT 47MF	20% 16V	R9	1-216-073-00	METAL GLAZE 10K	5% 1/10W
C17	1-123-875-11	ELECT 10MF	20% 50V	R11	1-216-095-00	METAL GLAZE 82K	5% 1/10W
C18	1-137-047-11	FILM 0.01MF	10% 400V	R12	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C19	1-137-047-11	FILM 0.01MF	10% 400V	R13	1-216-071-00	METAL GLAZE 8.2K	5% 1/10W
C20	1-126-233-11	ELECT 22MF	20% 50V	R15	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
C21	1-126-233-11	ELECT 22MF	20% 50V	R16	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C22	1-137-098-11	FILM 0.1MF	10% 100V	R17	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C23	1-137-031-11	FILM 0.22MF	10% 100V	R18	1-216-063-00	METAL GLAZE 3.9K	5% 1/10W
C24	1-124-034-51	ELECT 33MF	20% 16V	R19	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C25	1-137-102-11	FILM 0.022MF	10% 250V	R20	1-216-075-00	METAL GLAZE 12K	5% 1/10W
C26	1-137-094-11	FILM 0.047MF	10% 100V	R22	1-216-099-00	METAL GLAZE 120K	5% 1/10W
C27	1-124-791-11	ELECT 1MF	20% 50V	R24	1-216-089-00	METAL GLAZE 47K	5% 1/10W
C28	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	R25	1-216-077-00	METAL GLAZE 15K	5% 1/10W
C29	1-124-791-11	ELECT 1MF	20% 50V	<VARIABLE RESISTOR>			
C30	1-124-791-11	ELECT 1MF	20% 50V	RV1	1-238-016-11	RES, ADJ, CARBON 10K	
C31	1-137-047-11	FILM 0.01MF	10% 400V	RV2	1-238-019-11	RES, ADJ, CARBON 47K	
C32	1-130-479-00	MYLAR 0.0047MF	5% 50V	*****			
C33	1-163-081-00	CERAMIC CHIP 0.22MF	25V	MISCELLANEOUS			
C34	1-137-031-11	FILM 0.22MF	10% 100V	*****			
C35	1-123-875-11	ELECT 10MF	20% 50V	Δ 1-460-091-11	COIL, DEGAUSS (KV-E2521D ONLY)		
C36	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	Δ 1-426-398-11	COIL, DEMAGNETIZATION (KV-E2921D ONLY)		
C37	1-124-477-11	ELECT 47MF	20% 16V	Δ 1-451-311-21	DEFLECTION YOKE (Y25FXA) (KV-E2521D ONLY)		
C38	1-124-477-11	ELECT 47MF	20% 16V	Δ 1-451-313-21	DEFLECTION YOKE (Y29FXA) (KV-E2921D ONLY)		
C39	1-163-197-00	CERAMIC CHIP 470PF	5% 50V	1-452-032-00	MAGNET, DISK; 10MM ϕ		
<FILTER>				1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ		
CDA1	1-404-751-11	DISCRIMINATOR, CERAMIC		Δ 1-452-509-42	NECK ASSY, PICTURE TUBE (NA-308) (KV-E2921D ONLY)		
CDA2	1-404-750-11	DISCRIMINATOR, CERAMIC		Δ 1-590-501-11	CORD, POWER(WITH NOISE FILTER)		
SFT1	1-527-840-00	FILTER, CERAMIC		V901 Δ 8-733-224-05	PICTURE TUBE (A59JWC60X) (KV-E2521D ONLY)		
SFT2	1-527-839-00	FILTER, CERAMIC		Δ 8-733-824-05	PICTURE TUBE (A68JYK60X) (KV-E2921D ONLY)		
<DIODE>				*****			
D3	8-719-400-18	DIODE MA152WK					
<IC>							



# ACCESSORIES AND PACKING MATERIALS

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PART NO.	DESCRIPTION	REMARK
*A-1678-001-A	BOX ASSY, WOOFER	
*A-1678-010-A	BOX ASSY (RIGHT), SPEAKER	(KV-E2521D ONLY)
*A-1678-003-A	BOX ASSY (RIGHT), SPEAKER	(KV-E2921D ONLY)
*A-1678-012-A	BOX ASSY (LEFT), SPEAKER	(KV-E2521D ONLY)
*A-1678-005-A	BOX ASSY (LEFT), SPEAKER	(KV-E2921D ONLY)
*3-704-280-01	BAG (STANDARD), PROTECTION	(KV-E2521D ONLY)
*3-704-283-01	BAG (STANDARD), PROTECTION	(KV-E2921D ONLY)
4-200-591-11	MANUAL, INSTRUCTION	(GERMAN/ENGLISH/FRENCH/ DUTCH/ITALIAN/PORTUGUESE)
*4-201-015-02	INDIVIDUAL CARTON (KV-E2521D ONLY)	
*4-200-036-01	INDIVIDUAL CARTON (KV-E2921D ONLY)	
*4-201-012-02	CUSHION (UPPER) (ASSY) (KV-E2521D ONLY)	
*4-200-041-02	CUSHION (UPPER) (ASSY) (KV-E2921D ONLY)	
*4-201-013-01	CUSHION (LOWER) (ASSY) (KV-E2521D ONLY)	
*4-200-042-01	CUSHION (LOWER) (ASSY) (KV-E2921D ONLY)	
*4-380-340-01	BAG, PROTECTION (KV-E2521D ONLY)	
*4-384-027-01	BAG, PROTECTION (KV-E2921D ONLY)	

## REMOTE COMMANDER

1-465-797-11	COMMANDER, REMOTE (RM-817)
4-031-670-11	COVER, POCKET (FOR RM-817)